THE MANKIND QUARTERLY

AN INTERNATIONAL QUARTERLY JOURNAL

dealing with Race and Inheritance in the Fields of

ETHNOLOGY · ETHNO- AND HUMAN GENETICS

ETHNO-PSYCHOLOGY · RACIAL HISTORY

DEMOGRAPHY AND ANTHROPO-GEOGRAPHY

Vol. V, No. 3 · January-March 1965

6s · $1.25

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

IAAEE REPRINTS

FINDINGS ON RACIAL DIFFERENCES BY MODERN SCIENTISTS

These Reprints provide scholars, students and others with easy access to important articles on the race question by leading scientists, originally published in specialized professional journals. Currently available are eleven titles. Others are in preparation. All are priced at 25 cents a copy, except Reprint No. 11 which is 50 cents.

1. KLINEBERG'S CHAPTER ON RACE AND PSYCHOLOGY by Henry E. Garrett.
2. ZOOLOGICAL SUBSPECIES OF MAN by E. Raymond Hall.
3. ON THE NATURE OF PREJUDICE by A. James Gregor
4. ETHNIC GROUP DIFFERENCES by Stanley D. Porteus.
5. THE CONTROL OF EVOLUTION IN MAN by C. D. Darlington.
6. THE EMERGENCE OF RACIAL GENETICS by R. Ruggles Gates.
7. THE RACIAL HISTORY OF SCANDINAVIA by Bertil J. Lundman.
8. SOME NEGLECTED ASPECTS OF THE 'MINORITIES' PROBLEM by George A. Lundberg.
9. THE S.P.S.S.I. AND RACIAL DIFFERENCES by Henry E. Garrett.
10. SOCIAL SCIENCE TESTIMONY IN THE DESEGREGATION CASES—A REPLY TO PROFESSOR KENNETH CLARK by Ernest van den Haag.
11. THE INHERITANCE OF MENTAL ABILITY by Sir Cyril Burt.

Order from:

THE INTERNATIONAL ASSOCIATION FOR THE ADVANCEMENT OF ETHNOLOGY AND EUGENICS, INC.

P.O. Box 3495, Grand Central Station
New York, N.Y. 10017

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

VOL. V, NO. 3 THE JANUARY-MARCH 1965

THE MANKIND QUARTERLY

— *mala opinio bene parta delectet* —

EDITOR
R. GAYRE OF GAYRE, M.A., D.Phil., D.Pol.Sc., D.Sc.

HONORARY ASSOCIATE EDITORS
Professor HENRY E. GARRETT, Ph.D., D.Sc.
Professor CORRADO GINI, LL.D., D.Soc., D.Sc., D.Econ., D.Soc.Sc.

ASSISTANT EDITORS
ROBERT KUTTNER, B.S., Ph.D.
ROBERT H. S. ROBERTSON, M.A., F.G.S.
DONALD A. SWAN. B.A.

HONORARY ADVISORY BOARD
Professor Santiago Alcobé, Barcelona, Spain; Professor P. C. Biswas, Delhi, India; Professor Alberto Xavier da Cunha, Coimbra, Portugal; Professor A. P. Elkin, Sydney, Australia; Professor Luigi Gedda, Rome, Italy; Professor Dr E. Hanhart, Zurich, Switzerland; Professor J. D. J. Hofmeyr, Pretoria, South Africa; Dr Watson Kirkconnell, Wolfville, Canada; Dr Taku Komai, Kyoto, Japan; Professor Bertil Lundman, Uppsala, Sweden; Professor Frank C. J. McGurk, Villanova, Penn., U.S.A.; Professor Branimiro Males, Tucuman, Argentina; His Excellency Professor Gaetano Martino, Rome, Italy; Dr Clarence P. Oliver, Austin, Texas, U.S.A.; Professor S. D. Porteus, Honolulu, Hawaii, U.S.A.; Dr David C. Rife, New Delhi, India; Professor Alfredo Sacchetti, Naples, Italy; Professor M. R. Sahni, Panjab, India; Professor Herbert Sanborn, Tennessee, U.S.A.; Professor Walter Scheidt, Hamburg, West Germany; Dr John Scudder, New York, U.S.A.; Professor Sergio Sergi, Rome, Italy; Dr Audrey M. Shuey, Lynchburg, Va., U.S.A.; Professor M. J. Sirks, Groningen, Netherlands; Professor Torsten Sjögren, Stockholm, Sweden; Professor Dudley Stamp, Bude Haven, England; Professor Charles C. Tansill, Washington, U.S.A.; Professor Giovanni Tucci, Naples, Italy; Professor Harry Turney-High, Columbia, S.C., U.S.A.; Professor H. V. Vallois, Paris, France; Dr R. J. Walsh, Sydney, Australia; Professor K. Robert V. Wikman, Abo, Finland.

Published by
THE MANKIND QUARTERLY
Editorial Offices:
1 Darnaway Street, Edinburgh 3, Scotland
Subscription Offices:
102 Great Russell Street, London, W.C.1

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

VOL. V, NO. 3 JANUARY-MARCH 1965

CONTENTS

PROBLEMS OF ABORIGINAL MENTALITY
by S. D. Porteus 123

ROMAN CULTURE AND DYSGENIC LEAD POISONING
by S. C. Gilfillan 131

RACIAL DIFFERENCES AND PHYSICAL ANTHROPOLOGY
by Donald A. Swan 149

ETHNOLOGICAL ELEMENTS OF THE SOUTH-EASTERN MEDITERRANEAN AND NORTH-EAST AFRICA
by R. Gayre of Gayre 161

OBITUARY
Professor Heinrich Quiring 174

BOOK REVIEWS 175

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

PROBLEMS OF ABORIGINAL MENTALITY

By S. D. PORTEUS

Events taking place in many parts of the world today are focussing interest on the social, industrial and educational development of native peoples. Humanitarian impulses for the most part override and overreach scientific considerations. Uninformed interest, no matter how nobly motivated, usually goes too far and ends in frustration and at least partial defeat. Nevertheless, one must be thankful for humanitarianism. Without it nothing of benefit is likely to happen to the underpriveleged. Scientific endeavour unless touched with kindliness and humane concern is likely to prove barren.

Surely, in this presently confused world, there is need for understanding as well as sympathy. It is well, I believe, to begin with the recognition that vast numbers of individuals, including whole segments of mankind, must, for the present and for long periods to come, have their planning done for them. Of all human traits, those of planning and foresight seem to be developed best by use and experience. It is a truism to say that the great innovators became so by innovating, and this entailed planning. They were doers as well as thinkers, but their thinking involved direction and direction involved choice.

Much of my time for at least fifty years has been spent in attempting to observe and measure the tendencies of individuals to foresee and plan their personal and ordinary social activities. One of the obvious conclusions of this experience is that individuals, and probably groups of individuals, differ markedly in the strength of that tendency. In the acquisition of knowledge, just as is the case with wealth, interest and effort are geared to capacity. Instead of all men being born equal, the truth is that, of all animal species, mankind is born mentally and temperamentally unequal or different.

True, I am only sure of these facts by experiments at comparatively simple, everyday levels. As of August 1964, it is exactly fifty years ago that the Porteus Maze Tests were publicly described at the Melbourne meeting of the British Association for the Advancement of Science. Since that time they have been applied to a most variegated sample of mankind, variegated as regards color, race, geographical location, sex, education, intelligence and type of industry. My subjects included also the mentally and socially abnormal. The only way I can sum up this experience is to affirm that in this rather elementary measure of foresight and

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

planning capacity—traits which we might combine with personality trends under the term "planfulness"—individuals and groups of individuals segregated in the above categories differ quite markedly. Perhaps more attention has been paid by me to racial and sex differences in "planfulness" than to any other enquiry.

As to how these differences arose, and to the extent to which they may be accentuated or diminished by education or social opportunities, I am not competent to state. Nor do I believe that others are more knowledgeable in this matter. There is, however, some indirect evidence that opportunity for use, plus differential capacity, plus education, are some of the factors that determine retention of "planfulness" in the aged.

Milton B. Jensen (1961) has carried out a study of 211 consecutively admitted veterans of two world wars and the Korean conflict entering the Veterans' Administrative Center, Hot Springs, South Dakota. He divided them by decades into four age groups—below 46, 46 to 55, 56 to 65, and above 65 years of age. Jensen used the Wesman Verbal Personnel Tests as a measure of verbal intelligence, and the Porteus Maze Tests (1959) for non-verbal intelligence. His graph shows an expected steady decline in verbal ability after age 45 but with little average decline in the non-verbal test. With other measures this retention of Maze-tested abilities could possibly be attributed to insensitivity of the tests used, but since 1949, when the effect of frontal brain operations (Columbia Greystone Associates 1949, 1952, 1956, Porteus 1959, Smith 1960) has been studied, no one is likely to question the sensitivity of the Porteus Maze, since no other tests or scales of tests showed such declines after operation. Actually, Jensen's work should be considered in relation to Smith's eight-year follow-up of topectomy patients. The drastic Maze declines that Smith demonstrated should not be ascribed to the ageing process since Jensen's elderly group, on the average, do not show any significant loss in Maze tested abilities.

However, this is true only as a generalized observation. When Jensen's cases were re-segregated according to levels of previous education, he arrived at some very interesting results. While the verbal intelligence loss was relatively great in the more highly educated group, the rate of decline with age for all groups was steady, so that the oldest group were about 8 I.Q. points below the average level of those at 45 years. Level of education did not seem to affect the rate of deterioration.

The case stood somewhat differently in regard to Maze (non-verbal) scores. Jensen says:

> Those who completed less than eight grades evidence the same general decrease in score with advancing age that was shown on the verbal tests. With more than eight grades of

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

schooling, the trend is reversed; as age increases, so does Porteus test score. We think that, in general, our oldest subjects are superior to the younger ones in native ability and that cerebral cortical functioning is little or very late affected by senescence.

A possible explanation of the above finding is that longevity may be related causally to foresight and prudence, both of which are rather clearly reflected in good Maze performance. Caution and the habit of careful weighing of chances in everyday behavior adjustments should contribute to the avoidance of risks and accidents. This question could be rather easily investigated by Maze measurements of a group of accident-prone people. The avoidance by the long-lived of heavy smoking and drinking is also evidence of long-range foresight. Whether the Maze is an adequate measure of what I have called deferred or long-projected planning is not certain, but surely the fact that the very old retain maze solving ability is signficant, since obviously, either by good luck and/or by good management, they have survived. Jensen's results raise the further interesting query as to whether the achievement of relatively higher education is not in itself some evidence of foresight. Undoubtedly most people are aware of the fact that earning capacity tends to rise with educational level, and that the sacrifices entailed in continuing educational effort are financially well worth while. The improvement in industrial prospects with longer education has been, of course, the subject of statistical enquiry.

An excellent complementary study of the effects of senescence has been carried out by Loranger and Misiak (1960), who studied the test reactions of elderly females. Their 50 subjects were carefully selected from a total of 140 women from 70 to 80 years of age living in eight geriatric centers, which can best be described as retirement homes. The authors term these homes modern and progressive where, as much as possible, the factor of isolation from the community is diminished. These selected subjects showed absence of neurological, ophthalmological or psychiatric symptoms and serious illness of any kind. The tests used were the Porteus Maze, the Wisconsin Card-Sorting Test, the Raven Matrices, the Digit-Symbol and the Thurstone Primary Mental Abilities Reasoning (PMAR) Test.

The authors found that the Maze exhibited a wide range of scores in strong contrast with steady decline in the other tests used; in other words, it discriminated better among these elderly subjects. Although half the subjects were below 10 years in mentality, as many as 16 per cent scored 15 years or above in the Maze. Thus individual differences were marked. The authors suggest that foresight and planning may be mental functions that are affected less

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

in some individuals by the ageing process than are other more general traits such as abstract reasoning. They add: "Practically no elderly subject performs as well as the average adolescent and young adult, except on the Porteus Maze." Apparently, individual differences are certainly very marked in Maze-tested abilities.

There is a diminution of capacity for abstract reasoning, memory, computing ability and range of vocabulary. Like the trees of the forest, we die at the top; but the elderly are forced by circumstances to continue making decisions, financial, personal or social in nature, many of which have survival values. Just as is the case with physical activities, deterioration is slowed down by constant exercise.

Loranger and Misiak in their study (1959) had also included Critical Flicker Fusion (CFF), and they summarize their results as follows: "All tests of intelligence functions, *except the Porteus Maze* [my italics], correlated significantly with CFF." If, as is assumed, Flicker Fusion is affected adversely by age, this lack of correlation with the Maze would indicate increased resistance of Maze-tested functions to the inroads of senescence. Is this mental durability of planning and decision-making equal in all races?

In relation to the mentality of primitive subjects, investigation of the comparative effects of old age would be most interesting. We need to know the facts not only with regard to averages reached in test performance, but to the durability of mental traits. In spite of the dogmatic assertions of egalitarians as to the insignificance of racial differences, the facts have never been discovered or properly investigated, especially in relation to range and persistence of racially distributed abilities. We need much more research and much less emotionally directed asseveration. It would still be possible to carry out Maze examinations of full-blood and part-aboriginal cases to determine the rate of decline in senescence. The fact that primitives accept the Maze as a worth-while activity should be most important in this connection. It would certainly be important to discover if the same phenomenon of resistance to deterioration is less or more observable with Australian aborigines than it is with Whites. Because of the sparsity of aboriginal population, the study would involve much travel and considerable hardships, but in such an important question as the reality of racial differences the effort would certainly be worth while. It could still be done in the Northern Territory of Australia and in North Queensland.

The system of old man dominance in Australian tribal affairs might be a factor affecting results. The fact that in tribal affairs the elders of the tribe make the most crucial community decisions means that they get considerable exercise in this type of behavior. On the other hand, however, their decisions are rarely original but

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

are based on tradition and custom rather than on individual judgment or initiative. In any case, here would be a fruitful socio-psychological field of anthropological endeavor. If the work is too difficult to carry out in Australia, there are available, under the Australian mandate, thousands of Papuan natives. The fact that the Maze is acceptable to primitives and can be administered almost independently of language would be of inestimable importance in such a study. Used in conjunction with tests more directly related to general intelligence, comparative educability could be predicted in individual cases, a feature that should be of vital interest to native administrators.

But valuable as such an index would be, a more direct assessment of native learning capacity would be of greater advantage. In other words, instead of being dependent on an *index* of potential educability, why not measure the rate at which primitive subjects actually acquire scholastic skills? At one time such a program would have taken months and even years of work. Because of new devices, sampling scholastic achievement is now a matter of much less difficulty. By means of a new spelling-reading aid, the Porteus-Diamond machine,[1] it was possible for Japanese three-year-old children to read and spell correctly 15 words in three teaching periods of 11 minutes each, or 33 minutes in all. True, these were bright children, but if instead of 15 words learned the number had been less or more the learning rate could still be arrived at objectively.

The invention of this machine, now widely known in America, came about through research into the sequential memory of Australian aborigines. While located temporarily at the University of Adelaide in March 1962 I experimented with a similar machine especially adapted to the cultural background of Central Australian natives. A number of photographs of native animals, such as the dingo, kangaroo, spotted wild cat, emu, carpet snake, and so on, were mounted on wooden keys. Mr Druce, technician of the Psychology Department, built to my specifications a machine in which, when the keys were struck in a given order, the photo of an aboriginal appeared suddenly at the back of the machine. The subject was told that while hunting he speared first a kangaroo, then an emu and last a dingo, the keys bearing the pictures being struck by the examiner in that order. The "jump up" of the photo of the man was the signal for success. The sequences were then varied and increased so that the memeory range could be noted.

Unfortunately, the machine was crudely constructed and the automatic signalling of a correct sequence reproduction did not

[1] For a description of this and other modernized teaching devices, see Porteus, *Streamlined Elementary Education,* Pacific Books, Palo Atlo, California, 1964.

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

always work satisfactorily. On my return to Honolulu I sought the assistance of Dr A. L. Diamond, who devised an electrically controlled machine which retained the principle of working only if the correct sequence of keys was struck. The idea occurred to us to use letters instead of photographs of animals so that the machine would test letter sequences instead of pictured animals, and thus test reading-spelling potentiality. Dr Diamond then worked out a scheme whereby, if the correct letter keys were pressed, cards which also bore a picture of an object or animal alongside its name dropped by gravity, exposing the printed letters in proper sequence. For practical purposes, a machine operating by gravity was much better than one which required electrical connections. Again, the principle inherent in the older memory-for-animals machine, namely, that nothing happened unless the right keys were struck in correct sequence, was retained.

It was at once apparent that the child enjoyed manipulating the machine to a much greater degree than being taught from a primer. His interest was stimulated by several considerations. In the first place, he learned through his own experimental efforts and not by mere verbal instruction, and most children prefer self-dependent activity to being dominated or controlled by an adult—often an almost complete stranger or, at best, a person unconnected with him by ties of family or affection. In the case of primitives the teacher and pupil relationship is further complicated by the differences not only in race but in social status. This learning by doing rather than submission to direction has advantages that need not be underlined by a social or clinical psychologist.

The rather profound effects of an unexpected relationship with a person of almost completely alien origin were well illustrated in 1934 by an experience of my own while testing "raw" natives in the mine compounds of Johannesburg, South Africa. Immediately after their recruitment as mine laborers, miscellaneous groups of Shangaans, Mchopi, Amaxosa and others from the Portuguese East African borders were literally herded into a central compound for medical inspection and orientation. As these were convoyed into the examining room by our Zulu interpreter and helper, we soon found that it was advisable to allow each new entrant fifteen minutes to watch the testing procedures, especially those carried out by Mrs Porteus, who was assisting me. Undoubtedly this was the first time any of these natives had seen a white woman at close quarters and the opportunity to gaze their fill for ten or more minutes was most helpful to adjustment. Had we been equipped with a learning machine, its mechanical operation and the experience of making the letters appear in a slot as if by magic would have acted, I am sure, as an effective counter-stimulus. We all realize that having something to do with our hands is most helpful in

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

overcoming or lessening shyness and the embarrassments of failure. Thus the machine could be used as an "ice-breaker" to remove or diminish the barriers of distrust or misunderstanding that naturally arise on the part of a primitive subject on his first contact with a white stranger, who in the process of mental examination demands cooperation in very novel and even mystifying activities. Fortunately, the doing of a Maze test has an instant appeal, in the great majority of instances, as a game which the primitive individual is quite willing and even eager to play. Our South African experience included tests and measurements quite different from the Maze, and it is with these that "rapport" is so difficult to establish. Even with the Bushmen of the Kalahari there was no apparent reluctance or mystification as regards solving mazes. They accepted the testing procedures without hesitation, and when because of poor eyesight or old age they were omitted or debarred from the list of those tested they frequently made special requests to be allowed "to play the white man's game." The same eagerness to participate was observed among Ainu, Formosans, Alorese and Senoi in South East Asia, and was especially marked among Australian aboriginal subjects. This point is important, since inexperienced commentators on racial testing procedures, including anthropologists, frequently base strong objections to the results on the grounds of native disinterest or even opposition to the testing procedures. This criticism certainly carries no weight as regards the Porteus Maze.

In the operation of the teaching machine, once the subject has sufficiently practised the reproduction of a pictorialized word such as c-a-t, his successful learning is tested by covering over the printed name of the animal or other object. When the pupil can spell out and reproduce the word without error, another card is inserted and the learning process is continued. In recording the rate of learning it is necessary to note the number of trials necessary for each word and the time before flawless operation of the machine is achieved. The total time of operation for each individual and the number of words learned is the measure of his comparative learning rate. The cards are numbered in order of insertion so that the testing will deal with the words presented in the same order.

So as to make this testing procedure entirely fair to primitive subjects it was decided to use words that were fully familiar to Central Australian children in their own language. Accordingly, with the cooperation of the then superintendent of the Finke River Mission, Pastor Phillipp Scherer, a list of forty names of native animals and objects was drawn up and printed in the Arunta (Aranda) language. Fortunately, the availability of an illustrated dictionary for use with a neighboring tribe made it possible for him to copy the appropriate line drawings on cards for insertion in

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

the machine. Typical of these words were *ura* (fire), *atua* (man), *apma* (carpet snake) and *rara* (kangaroo).

Unfortunately the school, which was under the control of the Department of Territories, followed the departmental ruling that instruction must be given in English. The headmaster, Mr Robert Arnold, who undertook the investigation, preferred therefore to use the machine only outside of regular school hours. This actually interfered with the completion of the study.

However, in one respect this condition of extra-curricular application was useful in providing indication of the machine's appeal to the interest and scholastic industry of the Mission children. On the occasion of my visit in 1963 to observe the experiment there was no difficulty in securing subjects. Children actually lined up in queues to take their turns at manipulating this new spelling and reading device. Mr Arnold reported to me that on Saturday mornings the boys shifted their football playing space to the proximity of his house, in the hope that they would be called in to use the machine. Anything that causes Australian aboriginal boys—or any boys—to prefer reading and spelling practice to football is indeed fascinating. Moreover, when the children were operating in small groups of five subjects, their chief delight was in watching and attempting to correct the mistakes of their companions. With Australian aboriginals group learning seemed more effective than individual learning.

Unfortunately, Central Australian summers, during which temperatures of 120 degrees in the shade are not uncommon, are hardly conducive to research, or effort of any kind. The study, though incomplete, proved two things: one, that the machine was of compelling interest to native children; and, secondly, that it offers an excellent opportunity to measure rate of learning and thus provide an index of educability, since the children undoubtedly learned.

It would seem that the way is now clear for further investigation by psychologists, particularly Australians, of the problems of primitive mentality. Unfortunately the difficulties of travel, assemblage of native subjects, and desert living and working conditions remain. But, through the availability and appeal of both the Maze Test and a mechanical teaching device, the greatest difficulty of all—the choice of tools of research that promise to yield results capable of significant interpretation—is now obviated.

I would like to commend to the notice of my professional colleagues the opportunity thus to examine and assess the problem of the comparative range and durability of that trait or complex of traits which can be summed up as "planfulness." This seems to me to be one of the most significant factors in physical and mental survival. Since these primitive people do manage to survive, thus proving their ability to master a most trying enironment, the study of their mentality and temperament should surely be fruitful.

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

ROMAN CULTURE AND DYSGENIC LEAD POISONING

By S. C. GILFILLAN

Our novel theory concerns what mattered most about the fall of Rome. This was not the empire's military defeat and break-up—those might even have been benefits to mankind. What concerns us most is the *decay* of Rome, the decline of every aspect of her civilization except technology, the debasement of her arts, the cessation of novelty and progress, the complete disappearance of science after the second century, and the retreat from almost all that had spelled "the glory that was Greece, and the grandeur that was Rome." There are many indications that Greece had been smitten in the same way a few centuries earlier—when her genius suddenly declined and her population presently shrank—and that it was the importation of Greek wine-making and cookery into the Roman mansions which chiefly ruined the Roman aristocracy; but the proof for Greece is left for better Greek scholars. Here we present a completely new explanation for the Roman decay.

THE ARGUMENT

Our reasoning involves the chain of facts listed below. Those already proved by familiar and conclusive evidence are followed by the letter (F) and will be but briefly treated. Facts not well known, but already proved by Hofmann, Kobert and other specialist authorities are marked (S) and set forth with sufficient documentation and argued with sufficient cogency, I hope, for this first detailed presentation. The major ideas which have been personally added are distinguished by (G) and developed as necessary:

1. Roman culture declined and lost progressiveness, except in technology (F).
2. Rome's cultural progress, except in technology, depended on the upper class (F).
3. The Roman upper class, beginning about the second or first century B.C., died out with extreme rapidity. Each generation was perhaps a fourth of the previous one, largely through rearing very few children (S).
4. All possible causes for this extermination have been examined, especially lead poisoning of the wives and mistresses of upper-class Romans—chiefly because their diet, after the introduc-

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

tion of Greek cookery around 150 B.C. and the relaxation of the old rule against wives drinking wine, was full of lead. The most significant sources of the lead were wine and grape sirup (S).

5. Lead poisoning of women and children produces sterility, miscarriage, stillbirth, heavy child-mortality and permanent mental impairment in the children (S).
6. Lead poisoning was thus sufficient to produce the observed decimation of the upper class; and nothing else was, venereal disease being then unimportant (G).
7. However, the Roman free poor and the slaves had much less lead in their diet (G).
8. There were other checks to their reproduction, especially poverty, and there were positive interferences with slave reproduction (F).
9. But despite these they must have maintained their numbers without much decline, because the Roman population as a whole did (F).
10. From items 3 to 6 it follows that whatever qualities enabled Roman individuals to make money—or to marry or mate with money—were rigorously bred out of the race and culture by the effects of lead and lesser forces, and the meek inherited the earth (G).
11. Technical invention, however, was in ancient times confined to the artizan class—apart from architecture, civil engineering and the art of war. So invention continued, albeit retarded (G).
12. Belief in eugenics is not necessary for acceptance of our thesis, for whatever qualities come not from heredity must come from education and other environment. And the upper-class environment was extinguished along with the aristocratic scions. The son of a slave or peasant might succeed to a vacant chiefship, but he could not have the education, family traditions or prestige of the scion, especially in an age of no scholarships (F).
13. In short, Roman culture lost its source of progress when and because its élite, endowed by heredity and/or upbringing with the powers to make or mate with money, was exterminated by various factors, above all by lead in the diet of the upper-class women (G).
14. The moral for today, when the Western upper class, about stable in numbers, are being swamped by the lower classes doubling in each generation—and the advanced races by the backward—is a moral plain to read (F).

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

That the Romans must often have been lead poisoned by their anciently recorded recipes and their pots and water pipes, was perceived as long ago as 1824 by A. Henderson. In 1883 the Austrian toxicologist K. B. Hofmann, and his German fellow worker Rudolf Kobert between 1883 and 1909, abundantly proved and explained this thesis by hundreds of citations from classical authors on ancient culinary and dietary customs, by illnesses they described, and by archeological survival of leaden containers for food and drink. Kobert's student Rosenblatt (1906) analyzed ancient bones for lead and found the saturnine metal in bones from the classical period but not in those from before and after. In 1949 the Canadian physician L. G. Stevenson wrote an unpublished doctoral dissertation on the history of lead poisoning, adding further medical explanations. We shall rely especially on the able, exhaustive and thorough work of Hofmann, Kobert and Stevenson.

Nevertheless, the subject has attracted scarce a word of attention in the 81 years since Hofmann proved ancient plumbism. The reason has been that all the students hitherto have totally missed the *class angle,* which alone gives to ancient plumbism its interest and social significance. If the Romans and Greeks were lead poisoned—what of it? They did not die out, and we have not heard of their being sickly. But if we perceive the class angle—that all the *rich* Romans and their tablemates were made almost childless, leaving the inheritance of the world to the less capable—*this* illuminates the famous problem of the decline of Roman culture (as of Greek culture earlier) and casts a revealing ray upon the similar situations in the world today.

Why were the ancient rich so reckless as to drink lead compounds daily? They had scarcely any idea of their poisonousness. They knew plumbism only as a disease of lead workers. Recognised since the time of Nicander in the second century B.C., it was the first or second industrial disease to be discovered. Their physicians also knew about *acute* poisoning by lead, and were cautious about lead in medicines. But as to lead poisoning from water or food, we can find hardly more than a reference or two, chiefly that of Vitruvius in his first century A.D. treatise on water supply, which was echoed by Galen in the second century. It was certainly not a well known danger.

THE NATURE AND PERTINENT ORIGINS OF LEAD POISONING

A brief description is needed of this disease, unfamiliar to most of us although it is still the foremost industrial disease—and probably weakens all of us to some slight degree. It comes from lead or any of its compounds being taken in by mouth, lungs or perhaps the moist skin. With continued daily intake any dose greater than about one milligram a day may be dangerous, and a

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

milligram is only 1/28,300th of an avoirdupois ounce. We are all getting about a quarter of that daily. Small amounts like these we can excrete, but any larger dosage is likely to pile up in the body, especially in the bones, whither it goes because of its kinship with calcium and where it does no observable harm. But when the store has become excessive, or when an acid condition of the body arises, perhaps through an alcoholic excess or an illness, then the lead is drawn out from the bones along with the calcium, and the person becomes evidently sick. But his symptoms are very varied and are unrelated to any particular act that might have enabled the Romans to perceive the connection with lead. Since the cause lay in the food and drink that all upper-class Romans consumed daily, how could they distinguish the morbific factor from everything else in their lives? Their physicians scarcely knew lead poisoning save as an acute accident or murder means, or perhaps as a disease of lead workers; and they had little to do with poor workers.

The varying symptoms of chronic plumbism include at first most conspicuously an obstinate and painful constipation, whose pain could be relieved by pressure around the navel and by opium —symptoms the Romans knew and recorded. Anemia, pallor, emaciation, a metallic taste in the mouth, dark stools, loss of appetite, and pains in the joints, are other signs. Further stages include paralysis of the extremities, starting with a peculiar wrist drop, headache, insomnia, blindness, and mental disturbances extending to insanity. "Crazy as a painter" was a proverb not long ago, when those craftsmen were usually lead poisoned. A wide range of further baleful effects occur in bad cases, including death. Those most interesting to us are various interferences with the fertility of men and especially of women, whom sufficient lead brings to sterility, miscarriage, stillbirth or premature labor; and their children born are apt to die prematurely.

Children also seem to be especially susceptible to plumbism, and the results are usually or perhaps always permanent physical or mental damage, such as epilepsy, if not death. Premature birth also often produces mental retardation. American city hospitals treat a succession of lead poisoned children, usually from the slums where they have developed *pica*, the habit of eating strange objects which include flecks of lead paint from old walls: lead is banned from modern interior paint. Also, infants crawl on the floor and then put their dusty hands in their mouths, whence, probably, the high death rate of children of lead-working fathers (Cantarow and Trumper 1944). The well-to-do Romans had lead paints, and the favorite color of their rich walls was the famous Pompeian red, colored by *minium*, a salt of lead or of mercury, also poisonous.

In summary, a markedly lead poisoned woman need expect no children at all to survive, and a moderately poisoned one would

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

have few. Furthermore, if her husband were also hit hard by lead, perhaps sterile by it, or sick or dead, and if the family scattered table scraps and libations on the floor, as the Romans did, and some paint peeled off, then the *lares* and *penates* (which might also be leaden statuettes) would assuredly have no inheritor.

So who would take over the large and beautiful house, with its frescoed Pompeian red walls, and all the wealth, leadership and plutocratic power that went with it? Perhaps some nephew or cousin, further concentrating the wealth. But on the whole the missing wealthy must be replaced from below. Some able man born poor, perhaps the son of a freed slave, would scramble up the ladder, by luck, brains, energy and rapacity, gaining enough money to buy the house and secure the leadership functions. At first this might work pretty well, even if the able parvenu lacked the education, aristocratic traditions and prestige of the dying nobility. But when the same process had been repeated for generations, for six centuries as happened in Rome from the sack of Corinth until the pathetically named Romulus Augustulus shipped his nugatory crown to Constantinople, there would not remain much brains or beauty (or whatever qualities enable people to get money by one means or another) let in the lower classes, so persistently drained of their ablest, to replace the ever perishing rich and highly trained.

But were not the poor dying out at the same time, for the same reasons? In Greece to some extent yes, but hardly in Rome. In both areas the poor were constantly reënforced in some degree by war-captured slaves, although the reproduction of these was much interfered with in various ways, especially the northern captives and other gang laborers in the Roman world. The diet of the poor was not so badly lead poisoned under the Romans. It is safe to say that the poor had not much wine, olive oil, grape sirup or drinks from other fruit or honey, or preserved fruits, these being the chief distinctive dietary sources of lead for the best people. Nor did they have the luxuries of cosmetics, nor so much lead paint around. They drank the same water which would be leaded if it came through lead pipes and was acid from decaying vegetation or from volcanic, basaltic soil, or was neutral, like rainwater. Hard, alkaline water takes up no lead. But lead pipes were presumably less used in the country, where more of the poor and the unintellectual always live, than in the cities. The diet of the poor was mostly porridge, made from barley and other grains and perhaps acorns, but it also included bread, legumes and other vegetables, greens, vinegar, and a little meat, fish, milk, fresh or dried fruit, and wine. Less cooking might be done than for the rich since wood fuel was expensive, the nearby forests having been denuded, and transport being bad from lack of horseshoes and good harness. For cooking and liquid food storage the poor would be likely to use cheap earthenware,

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

everywhere locally made, rather than expensive lead-lined bronze carried from afar, although this metal would save fuel. Where there were large groups of slaves the boiling and storing would be in larger pots than for the master's family, giving less leaded surface per unit of contents if the vessel were leaden or lead-plated. In any case it is perfectly clear from historical and epigraphic records that in the Roman Empire outside of Greece the poor, the mass, almost preserved their numbers, plagues notwithstanding, and the rich, having few children, did not.

Cooking, which spells heat, greatly heightens the take-up of lead, especially if the pot be scraped from time to time to prevent burning, as is needed with thick liquids. The ancient writer Columella[1] said this scraping must be done in making grape sirup, which the well-to-do boiled down to as little as one-third volume, for sweetening and preserving things. Sugar, imported from India, hardly existed, and otherwise they had for sweetening only costly honey, and the various fruits. They often leaded these too.

LEAD AND ITS ANCIENT SUBSTITUTES

To understand further how lead could be ingested in so many ways by the ancient aristocracy, we should first explain its position among the metals and other substances that might have been substituted for it, especially as containers of acid food; for the relation of lead to the rest—its comparative merits as they seemed —was very different in ancient times from today.

Lead was a metal the ancients produced in superabundance, and hence used wholesale. It is the easiest of all metals (save sometimes iron) to mine, smelt and fashion, and needs only moderate heat. It was used in Anau I, in 4200 B.C. Later, especially with the invention of the cupellation process in the third millennium B.C., lead became usually a by-product of silver mining. Today the reverse is true, so that silver is usually a by-product of mining lead and other metals. In the great silver mines of Laurion, the fountain of Athens' prosperity, 300 ozs of lead were produced for every one of silver. Sometimes they threw the lead away. It has been estimated[2] that 2,100,000 tons of it were produced there in three centuries. On the Greek wine-ship of about 150 B.C., recently salvaged, they had tacked a rather useless 200 tons of cast lead sheathing.* 1200 tons were used to take an aqueduct under one

[1] Lucius Junius Moderatus Columella, *De Re Rustica,* xii, 19 and 20.

[2] Karl B. Hofmann, 1885, "Das Blei bei den Völkern des Altertums" (also in R. Virchow-Holzendorff [Editor], *Sammlung gemeinverständlicher wissenschaftlichen Vorträge,* Vol. XX, pp. 565-612), citing Cordilla.

* Hardly useless, as it is necessary in warm waters to sheath the timbers of vessels to prevent the damage caused by marine borers. Today we use copper and fibreglass.—EDITOR.

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

valley. Most of this dangerous metal they used in a great variety of domestic ways, often in contact with food or water, since they had so little idea of its poisonous nature. They used it for water pipes and containers, pots or their internal plating, cups, toys, statuettes, tokens, coins, lids, sieves, household repairs, solder, paint, cosmetics, external medicines, boxes, lead pencils, writing tablets, coffins and roofing. They alloyed it with copper (lead-bronze) and with tin (pewter), and used it in many other ways.

Lead was the only metal cheap enough for common use which they could join by welding, and the only one they could cast, save the rather expensive copper. Iron and steel they had in fair abundance but could shape only by hammering, punching, chiseling and grinding; they could not cast, weld, roll or draw iron or most other metals. Tin, which they were sometimes wise enough to use in food containers, was very expensive, twelve times the cost of its saturnine substitute. They were called by related names (*plumbum album et nigrum*), were doubtless sometimes confused, or the cheap one substituted by fraud, and the two were often alloyed. Silver was so precious as to be practically out of our purview. And those were all the metals they had, apart from gold, mercury and, in alloys, a little zinc, antimony, nickel, etc., none of which were significantly used with food.

Thus they could not cast a kettle of innocuous iron, or hammer out an iron skillet save with much difficulty. Their pottery, of common clay like our tiles, was weak, thick, porous and a poor conductor of heat. They naturally cast pots of copper or bronze when they could afford it. But then they easily learned well that when you leave acid food in any cuprous metal it produces verdigris, green and evident to the eye, bad to taste, and promptly bringing sickness. But lead produces none of these signals: its salts are light colored, tasteless or sweetish, and produce no immediate effects. In small doses lead, as we said, goes into the bones and stays there, harmless—until a considerable quantity is built up, which would usually have taken months or years. Instead of sickening you at once, like copper, it might kill your unborn child 20 years later; but you would never notice that connection. So, with fatal frequency, the well-to-do used leaden vessels, or lead-lined copper ones, for acid food, including most vegetables, especially for boiling. Heat greatly heightens chemical action, as we said. It was an easy matter to plate a bronze pot with lead or tin, or usually an alloy of the two; they simply heated the pot, then rubbed it on the inside with a piece of the low-melting metal. A cook could do it; and as one of the ancient writers said: "When the lead is worn off, renew it." That is, when you have eaten it up, eat some more. To be sure, they might use pure tin instead of lead for plating or for a solid cup, and they might use pottery or

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

a glass or silver cup. But with fatal frequency, probably usually with heat, they used lead. The poor, on the other hand, with their different diet and pots, and their lack of other lead contacts, managed to survive and replace their masters.

DAILY SOURCES OF LEAD POISONING

Into their wine the Romans put lead in as many as 14 different ways, as we shall tell later. The final, saturnine touch of perfection was to warm the wine before serving it in cold weather. Since the houses were scarcely heated we can imagine they reckoned many cold days. The warming was naturally done in a lead-lined bronze apparatus with a charcoal brazier—unless by luck they used a lining of pure tin. In early Republican times, up to the Gracchi, wine had been scarce and precious: but after the conquest of Greece it became abundant for the wealthy, along with other luxuries.

The aristocracy's most significant source of lead was grape sirup, which they called irregularly *sapa* or *defrutum* (for *defervitum*) according to the degree of boiling down of the unfermented grape juice (or must), to 2/3, 1/2 or 1/3; or they sometimes called it by its Greek names *car(o)enum, hepsema* or *sireion* (*siraeum*). Such sirup is still used for flavoring and sweetening in some Mediterranean countries, and in modern food manufacturing, so that we have all consumed this grape concentrate. To boil it meant, in Roman times, introducing much lead, unless again by luck they used pure tin plating instead. Pliny[3] gives directions for making it: "Leaden and not bronze pots should be used." And the like said Cato,[4] Palladius[5] and Columella.[6] We cited the latter's injunction for stirring. Pliny evidently envisaged a solid leaden vessel, for he warns against leaving a pebble in it lest this causes a hole to melt through the pot. Hofmann tried the experiment of boiling down Styrian must to one-half, with a plate of lead in it not once scraped. The grape sirup took up 237 mg. of lead per liter, enough to sicken a man most severely by long consumption of one tablespoonful a day.[7]

This slow poison, this delicious sirup, was very frequently put into wine to give it bouquet, strength and keeping quality. Also,

[3] Pliny the Elder, *Natural History,* xiv, 27, xxiii, 2 and xxxiv, 48-49, quoted in Alexander Henderson, 1824, *History of Ancient and Modern Wines.*

[4] Marcus Porcius Cato, the Elder, *De Agri Cultura,* cap. 105 and 122.

[5] Rutilius Taurus Aemilianus Palladius, fourth century A.D., *De Re Rustica,* xi, oct. 18.

[6] Lucius Junius Moderatus Columella, *De Re Rustica,* xii, 19 and 20.

[7] Rudolf Kobert, 1906, "Chronische Bleivergiftung im klassischen Altertum," in P. Diergart (Editor), *Beiträge aus der Geschichte der Chemie,* pp. 103-119.

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

they often boiled the must before fermenting it to wine, since with their insanitary methods the wine would often not last more than a year, if that.* The lead had two virtues, only one of which they knew correctly—that it gave a slightly sweetish taste. More importantly it poisoned the micro-organisms that cause fermentation and souring. Not having the modern art of sterilization by canning, they knew not that they were also sterilizing themselves. Grape sirup was further used for preserving olives, plums, cherries, apples, pears, peaches and quinces, cooked in lead. And the sirup figures in a large number of the luxury dishes in Apicius' cookery book. Grapes were preserved for a year by simply placing them in rain-water boiled down to one-third.[8] Why was there such a virtue in boiled down rain-water, which we should think was only pure water? Evidently because, not being hard water, it would take up lead during long boiling. And perhaps it had also been collected from a lead roof and stored in a leaden cistern.

A weak drink for invalids, *adynamon,* was made by boiling down grape sirup with sea-water. It was a favorite with courtesans. With myrrh the sirup made a special drink for women. Wine boiled with wormwood might be used for a hangover. Grape sirup with onion made an abortifacient.

Democritus said that if the must is too sour its acidity must be blunted by *minium,* lead oxide. Some minor sources of lead in wine were from storage in or drinking from leaden vessels, from the water they always mixed with it, from using grape sirup to cement the amphora's stopper, from mending amphorae with leaden clamps inside and out (but there was a coating of pitch), and perhaps from leaden parts in the wine-press. Similar additions of lead, deliberate or ignorant, have continued occasionally almost until present times, although they were under legal attack as early as the twelfth century.

Wine prepared in these poisonous ways was fit only for pouring out on the ground as a libation to Saturn, the god of lead. But the noble Roman did not know that, so he drank most of it himself and gave the rest to his wife or mistress.

Some recognition of the toxicity of the wine, though not of the lead in it, perhaps appears in the rule of the earlier Republic[9] that wives must not drink wine; for people may have observed that wine-bibbing wives had less children. The rule ceased to be observed in later republican times when wine had become no

* The reason for boiling the must was to increase the sugar content, and thus the alcoholic content. This fortification gives better keeping qualities.—EDITOR.

[8] A. Soyer, *The Pantropheon: or the History of Food and its Preparation.*

[9] Pliny the Elder, *Natural History, op. cit.,* xiv, 14.

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

longer a rare luxury but an everyday drink of the well-to-do. There was also an ancient tradition that fat women were more fertile than thin ones. This would be the reverse of the truth today, but would be true in ancient times, since emaciation is one of the symptoms of lead poisoning. A fat woman would be one who had somehow avoided lead. There were also ancient statements[10] that certain Greek wines produced sterility, miscarriage, constipation, headache or insomnia, all symptoms of plumbism.

That man has a sweet tooth to satisfy if possible is evidenced by the American consumption of sugar, nearly 100 lbs per capita per annum. Therefore the ancients who could afford grape sirup or the limited supply of honey used them very freely. Both are acid, so toxic if cooked in lead. Pliny and Celsus said that raw honey was a good laxative, but cooked honey was anti-diarrheic. This could happen only through lead.[11] Dioscorides (v, 16) said that hydromel, *aqua mulsa,* was honey mixed with twice its volume of spring water, then boiled down to a third to prevent fermentation. A sour honey preparation called *oxymel* Pliny says (xxiii, 29) was made by ten times heating honey with sea-water.* (Did they *want* sugar of lead and lead chloride?). At any rate two of its uses were as a contraceptive and an abortifacient. Another drink, which we might translate as wine-mead, was composed of must, water and honey, fermented, Celsus and Pliny say again that drunk cold it was laxative, but when hot it stopped diarrhea.[12]† Such opposite effects after cooking an acid food show that lead was involved: the possible escapes through cooking in tin-plate or pottery were not utilized.

OTHER CAUSES OF PLUMBISM

Water pipes, cisterns and containers must have been major sources of poison, except where the water was hard. Yet they were not the most *significant* morbific source, because the water was drunk by rich and poor alike, as we said. But lead piping was

[10] *E.g.,* Athenaus of Naucratis, second or third century A.D., *The Deipnosophists,* Gulick (*trans.*), p. 139; and Pliny the Elder, *Natural History, op. cit.,* xiv, 19 and xxii, 28.

[11] Rudolf Kobert, 1906, "Chronische Bleivergiftung im klassischen Altertum," *op. cit.,* p. 108, citing Pliny the Elder, *Natural History,* xxiii, 29.

* *Aqua mulsa* was not hydromel. Hydromel was mead—fermented honey and water. Oxymel was made from honey, vinegar, salt and water. It was used for sore throats and for salad dressing. See Gayre, *Wassail! in Mazers of Mead,* p. 113.—EDITOR.

[12] Rudolf Kobert, 1906, *supra,* p. 108, citing Pliny the Elder, *Natural History,* xxiii, 29.

† *Mulsum,* the liquor made of wine, honey and water, was strictly speaking not a wine-mead as it was not re-fermented. It was a sweetened, diluted wine.—EDITOR.

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

probably commoner in the city than in the country, and brains always gravitate to the cities. This would have been true among slaves also. Most of the domestics, artizans and "white collar" slaves were sent to the city, but those suited only for laboring went to the farms, mines and quarries in the country.

Pencils and writing tablets could have added lead through sweaty skin, or by hand to the mouth, nose or eyes. Leaden toys were especially dangerous, being used by children. Leaden tickets (*tesserae*) might have been carried in the mouth, like money in the old Greek substitute for pockets. Lead paints for the rich we have already discussed. Lead glaze on pottery was just coming into use during the Imperial period, as art work in wealthy hands, and became much used in the Byzantine period. If properly fired it is true glass and harmless; but it must very often have been insufficiently fired in ancient times, when fuel was expensive and pyrometers had not been invented. In Russia about 1905, 96 per cent of samples gave up lead on the first boiling of vinegar (Rosenblatt 1906).

Lead salts were used as contraceptives, or a lead plate might be worn for this purpose on the abdomen, which would often be sweaty. But various other contraceptives were used which were magical and useless, giving us reason to conclude that birth control was not the main factor in the low birthrate of the aristocracy.

Cosmetics were used only by well-to-do women. The Egyptians used galena for black eyebrow paint, the Greeks rubbed on *minium* for red cheeks, and ceruse ($PbCO_3$) for face powder was used in Greek times and almost to the present, although a deadly danger by inhalation (10 to 100 times worse than swallowing), absorption (?) and getting in eyes or mouth.

Lead salts were used deliberately as external medicines, for example to cicatrize an ulcer, with toxic effect, although the physicians knew better than to give them internally. Mortars, pestles, boxes for containing medicines, surgical instruments, and tubes to be left for a time in the body, were of lead. The poor had no doctors.

Disorders like those from lead are often described by the ancient medical writers, from Hippocrates onwards, and appropriate treatments were employed but rarely with any recognition of the leaden cause. Kobert[13] cites clear descriptions of lead colic by Soranos and Caelius Aurelianus in the second century A.D., with indications it was nothing rare. Dr Rutherford instances from Martial a drunkard, Phryx, who had lost the sight of one eye, and was warned by his physician to stop drinking. But instead he drank heavily of his favorite wine and lost his remaining sight. It

[13] Rudolf Kobert, 1906, *supra,* pp. 112-115.

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

was a clear case of optic neuritis from lead.[14] Dr Stevenson cites many other cases of apparent plumbism, such as epidemic paralysis, which often occurred in later centuries due to leaded drinks. The specially competent Kobert concluded that lead poisoning must have been as common under the Empire as tuberculosis plus syphilis were in the Germany of 1886.[15]

The proof of all these statements is not only from the multiple, corroborating and unimpeachable ancient writings, in many more passages than cited herein, but from archeological finds of ancient lead equipment. If leaden objects rarely appear in museums it is because they rarely have high artistic value, and are a dull gray instead of the attractive green of corroded bronze. Furthermore, lead would be melted in fires like Pompeii's, and I think a thin lead or tin plating would have disappeared in 15 centuries underground.

From the skeletal remains of 22 people from the ancient world, Kobert and his student Rosenblatt (1906) found lead in the bones of two from Roman Carthage and two from the same city before the Roman conquest, including a child in a stone coffin—from which we can conclude it was of a rich family. Th eother 18 cases came from outside the Roman Empire, in time or place, and showed no lead, although five early ones showed tin, and one showed copper. The chemistry of 1906 hardly permitted more accuracy with bones than saying that a metal was detected or not. Later the dithizone and other methods have enabled much more sensitive and accurate analyses for lead. So in 1959 Specht and Fischer examined the remains of Pope Clement II, who had died nine centuries before and was buried in a stone coffin in Bamberg. They found so much lead in a rib that he must have died of plumbism. I have therefore set out to gather bones from the Roman Empire and from earlier Greece which can be identified from the conditions of burial as definitely rich or poor, and with further desirable data. My first samples are being analyzed by the Kettering Laboratory in the University of Cincinnati, which has been carrying out great and accurate studies of the occurrence of lead in bones today. Distinction will be made according to which bone is analyzed, since they store lead unequally, and also according to the subject's age and sex, and whether circulating ground waters would have deposited lead therein, and how much. If it should appear that on the average the rich of the Imperial period were markedly poisoned by lead, and the poor not too much for reproduction, clinical research will have added a final seal of proof to evidence logically

[14]W. J. Rutherfurd, "Lead Poisoning in the First Century," *British Journal of Ophthalmology*, Vol. XVIII, pp. 36-38.

[15] Rudolf Kobert, 1886, *Ueber den Zustand der Arzneikunde vor 18 Jahrhunderten*.

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

sufficient without it. Preliminary returns from my first 40 samples, analyzed by Dr Robert A. Kehoe, are sufficiently consistent with the theory, but further analysis and more cases are needed, only seven so far being identifiably rich and 18 poor.

BIRTH AND DEATH RATES

Sociologists always want census statistics. We shall try to provide these with what little can be found from the ancient world (Landry 1936), *viz.*, for an aristocratic quarter of Roman Troy (Ilion), and from Miletus, both Greek. In the Trojan quarter, apart from the widowed and the new citizens (older men?) there were 101 men over age 19, of whom 66 were unmarried. Of the 35 married men, 18 were childless, 10 had 1 child, and 7 had 2 or 3, a total of 27 children from 101 men counted. They were doubtless younger than our adult population and their families not yet complete in some cases; but the deceased, departed and illegitimate children would not be counted. However we refigure it, there was evidently a very low rate of surviving children, and an extraordinary amount of celibacy, of which anon. The Milesian data are from the third to the first century B.C., and show that the naturalized men, an old group probably, had 1.36 children apiece.

From the very top of Roman society we have abundant data on their few legitimate children. Few of the Emperors had sons to succeed them. So the Antonines established the excellent system of *adopting* a fit man for heir. But at last Marcus Aurelius had a son, and by folly appointed him, the fool Commodus. If he had been mentally damaged by lead in childhood, that might be the explanation. By this appointment the Antonine habit of adoption was wrecked, and thereafter the "system" was a strong invitation to civil war every time an emperor died or someone chose to assassinate him. Here lies some explanation of Rome's political decay, and a contrast with the medieval and modern routine of thrones descending almost always automatically to the king's eldest son or another close relative.

The Romans recognized what was happening. The bachelor Horace persuaded Augustus, who had only a daughter, to pass laws penalizing aristocratic bachelors and granting special privileges, the *Jus trium liberorum,* to fathers of three or more children. But these laws were little enforced, despite long continuance on the books and efforts of various emperors to revive them. And there were payments to poor men with children. In time the *Jus trium liberorum* came to be awarded even to childless men and bachelors. Ovid, "the singer of tender loves" as he rightly called himself, provides a case typical of the Augustan age. Of equestrian birth, with one brother who died young, he had four marriages and one surviving daughter.

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

For a kith to survive its birthrate must equal or exceed its deathrate. Therefore we must seek to ascertain the aristocratic Roman deathrate. We can find some statistics based on tombstone inscriptions, therefore representing a class able to afford that modest luxury, although this often included freedmen. Indicated is an expectation of life at birth of 22 to 25 years (Wilcox 1937) compared with 72 for American Whites today. The Romans' longest expectation came about five years after birth. Such a high deathrate suggests two things. Firstly, that a very high birthrate would have been requisite to preserve such a race, instead of the very few births indicated by our literary and census data. Perhaps the aristocratic birthrate was a quarter of what would have been necessary to maintain their numbers. Multiply $\frac{1}{4}$ by itself 18 times, for the 18 generations of our history, and from the original aristocracy there would remain but a very small element and about as little also from most of the successive leadership cadres promoted as replacements from the most capable of the plebeians. Secondly, the high deathrate as well as the low birthrate suggests lead poisoning. Many must have died of it.

Evidently three factors with which we must reckon were deliberate restriction of offspring by birth control and abortions, homosexuality, and above all the extraordinary frequency of celibacy. As to contraception—the science of the process was so little understood, and the worthless and insecure methods so mixed with the effective, that I do not think voluntary restriction was the major factor in the infertility. A method might work nine times out of ten, and still plenty of children be conceived. Abortion was not rare, and like contraception sometimes used lead. Homosexuality was certainly frequent, though not so much as in Greece. But so long as people had heterosexual relations even occasionally, *e.g.*, being married, there would still have been many children, just as with insecure birth control. Celibacy, including intervals between the very frequent divorces, was certainly an important fact. But why did so many men prefer celibacy? I think we may find a leaden cause amongst others, thus: the chief purpose of marriage was to rear children; otherwise the ancient men would prefer full freedom, as Metellus Macedonius said in 131 B.C. in an oft quoted speech (Landry 1936). Children were wanted both for a patriotic and a religious motive, to continue the family as is the case with the Hindus and Chinese; but this religious motive declined. So, when the desire for children decreased, and also the possibility of having them, men largely gave up marrying. As they looked about them they would have perceived that none of their prosperous fellows had many children, that most who wanted to beget a child could not do so by the wife, and that a child born would like as not never grow up, or would be a girl. So why try to have a son and heir? So why marry?

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

The Roman moralists often declaimed against selfishness as the cause of celibacy and rearing few offspring. But consider that a moralist must blame people for immoral choices, or he is no moralist. He does not deplore the facts of nature, or what seem to be such, for example the infertility of old women, or the high deathrate of children, or the fact that the wealthy eat this and that which is tasty and seems harmless.

Another evidence of the importance of the lead factor is the apparent absence of illegitimate children, who played such an important rôle in the Middle ages and later (William the Norman, for instance) despite Christianity and the abundance of legitimate noble children. The wealthy Romans, especially the unmarried who Augustus said were all cohabiting, must have had countless mistresses both from their own class and from household slaves and others, and if children were born to them by such they must sometimes have cherished and claimed them, especially if they were without a legitimate son; yet we never hear of such. Philoprogenitiveness must have been as usual, as we shall show. Evidently there were few illegitimate children, unless by slaves who would not share their master's leaded diet, or be acknowledged by him. In Imperial times concubinage was registered at law, but its children were not inheritors. In so far as the illegitimates were born and lived, they carried on, though usually diluted, the race of the aristocrat, but not the culture.

Six other causes of the low birthrate have been proposed, but seem erroneous. Frequent divorce—but why should that stop conceptions? Promiscuity in our day goes with venereal disease, which has been very limiting to healthy births. But the ancient Romans did not have syphilis[16] and gonorrhea; they had some venereal disease(s), but not serious ones. The possibility of this last is shown by the fact that there are six venereal diseases today but only two of them are serious factors. Infanticide has also been blamed, especially for the reported excess of males in the aristocracy; but it does not seem to me to be in the Roman aristocratic character to destroy or expose a legitimate daughter, unless she were deformed or sickly—and by the second century the father no longer had this right.[17] We should note that the exposed child was often rescued by others. A deficiency of women in the aristocracy would also not prevent the men finding mates, since the Lex Canuleia from early times permitted them to marry plebeians. A love of pleasure and luxury has been blamed. But why should that slow up the sex drive? Philoprogenitiveness, if there be such an instinct for wanting children, could never be reduced in the genetic formula of a race, unless those who had more

[16] *Science News Letter*, Vol. LXXVII, p. 374.

[17] G Carcopino, *Daily Life in Ancient Rome*. p. 77.

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

of it left fewer surviving offspring, as might have happened, for example, after 1493, when American syphilis became a great scourge. Such a situation could not have happened in classical times, wherefore the Romans could not have lost philoprogenitiveness.

The continued decimation of the Roman aristocracy is an historic fact, variously attested. But decimation is not the right word, since it properly means the killing of a tenth, whereas it appears that about three-quarters were eliminated in each generation in the higher ranks of Roman society. One line of evidence is the disappearance of the old family or *gens* names of republican days, like Julius and Cornelius. With the families all gone about as early as the Republic, the Romans changed their naming system from strict inheritance to personal choice or parental bestowal, so that the name test cannot be used later. By Nero's time Tacitus said that nearly all the knights and most of the senators betrayed a servile origin.

There are still other possible causes, and all possibilities anent this aristothanasia, or death of the best, must be inquired into. Political proscriptions were certainly one factor, especially those of Sulla, Marius and Octavius, who slaughtered their prominent political opponents by thousands. The later emperors were less wholesale in their massacre of leaders. But it was always the prominent, the leaders by brains, devotion, energy and money, who were most often politically proscribed. Still, such leaders were usually men of middle age or older, whose consorts were probably so hampered by age and accumulated lead that they would have had no more children anyway. And the Roman proscriptors did not slaughter the wife and children with the father, as savager tyrants have done.

Only one other possible factor suggests itself—long hot bathing by men. The mammalian testes need protection from heat, as is shown by their always exposed position in the body. Experiments with rams, goats and stallions have shown that a temporary sterility can be produced by heat. And Japanese men are reported to have used hot baths before intercourse for birth control. Hot bathing was unknown in the earlier republican period, and nobles bathed completely but once a week or so. About 100 B.C. Sergius Orata introduced the "suspended bath," which was a tank suspended over a fire; and around the same time appeared the hypocaust, or heating by flues in floor and walls, and many great baths were built at which the well-to-do spent hours on end. Seneca (Ep. 86) declaimed: "I really think it makes no difference now whether a bath is hot or on fire. . . . Nowadays people would accuse Scipio of being provincial because . . . he did not stew in full daylight and want to be cooked in his bath." They used various sequences of

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

hot, tepid and cool, but it was the heat, if any part of bathing, which blocked fertility. And possibly today likewise. Historical change of costume should be ruled out, since throughout the Roman period men, like women, wore under the tunic a loin cloth, of wool or linen, called *subligaculum*.

FURTHER PROBLEMS SUGGESTED BY OUR THESIS

The authorities on lead poisoning have observed a wide variation of individual susceptibility to it. This suggests an hereditary trait; if so, and if the incidence of the poisoning were considerable, as in the ancient lower class, but not so rapidly exterminating is in the wealthy (where it coincided with other forces for aristothanasia), then the heredity of the poor would become modified in the direction of toleration for lead. Did this happen, perhaps in the closing years of the Empire? The answer might be sought from both modern and ancient data. Legge and Goadby (1912) thought they found family susceptibility, and that Italian lead workers were more resistant than Englishmen in the same shops.

One would also ask at once if other countries and ages have been similarly bedeviled by lead, besides Rome between 146 B.C. and 476 A.D. There is every indication, as we have often noted, that Greek genius had collapsed earlier still more suddenly, from the same pots and foods she had transmitted to Rome. Little Attica, which lit the world from Athens, may have laid the world low by her lead of Laurion. Egypt used lead in dangerous ways, such as in drinking tubes, and two or three times fell, after the Fifth, Twelfth and Eighteenth Dynasties, from progressive culture to near barbarism. What about Persia? When Alexander was slipping into alcoholism, insanity and death at 32, was he becoming lead poisoned? What about the Byzantines' lead glazes and their other artifacts?

When did western Europe learn to avoid eating lead? It must have been sometime in the Dark or Middle Ages. The first countries to show a revival of artistic ability, and interest in learning, were Ireland and Iceland. What did these two have in common, beside remoteness from Rome, and recent Christianization? A cool, rainy climate, entailing a pastoral economy and a milk diet—and milk is an antidote for lead.

The author is preparing a book on this Roman topic and its implications, and will appreciate suggestions, corrections and, especially, help in obtaining specimens from Roman bones identifiable as rich or poor, or remains of ancient wine and olive oil. His address is 1215 Ocean Avenue, Santa Monica, California 90401, U.S.A.

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

REFERENCES

Alexander Henderson, 1824, *History of Ancient and Modern Wines,* p. 339, quoting Pliny the Elder, *Natural History,* xxiii, 2.

Karl B. Hofmann, 1883, "Die Getränke der Griechen und Römer vom hygienischen Standpunkte," *Archiv für Geschichte der Medizin,* Vol. VI, pp. 26-40 and 269-289. Karl B. Hofmann, 1885, *Das Blei bei den Völkern des Altertums* (also in R. Virchow-Holzendorff [Editor] *Sammlung gemeinverständlicher wissenschaftlichen Vortäge,* Vol. XX, pp. 565-612).

Rudolf Kobert, 1886, *Ueber den Zustand der Arzneikunde vor 18 Jahrhunderten.* Rudolf Kobert, 1906, "Chronische Bleivergiftung im klassischen Altertum," in P. Diergart (Editor), *Beiträge aus der Geschichte der Chemie,* pp. 103-119.

Meyer Rosenblatt, 1906, *Beiträge zur Kenntnis der chronischen Bleivergiftung.*

Lloyd G. Stevenson, 1949, *A History of Lead Poisoning.* Doc. dis., 437 pp., in main library of Johns Hopkins University. Especially pp. 1-112 and 404-416.

A. Cantarow and Trumper, 1944, *Lead Poisoning,* pp. 84-87 and 142-144.

W. Specht and K. Fischer, 1959, "Vergiftungsnachweis an den Resten einer 900 Jahre alten Leichen," *Archiv der Kriminologie,* Vol. CXXIV, p. 61.

W. F. Willcox, 1937, "Length of Life in the Early Roman Empire," in *Congrés International de la Population,* Paris, Vol. II, pp. 14-22. Hornell Hart, 1947, "Technology and Social Change," citing Metropolitan Life Insurance Company, *Statistical Bulletin,* pp. 1-3.

A. Landry, 1936, "Qq. aperçus concernant la dépopulation dans l'antiquité Gréco-romaine," in *Revue Historique,* 177-1-33, pp. 2 and 3, citing, on Troy, Ch. Michel, *Recueil d'inscriptions grecques,* No. 667; on Miletus, Wiegand, *Milet,* Ergebnisse, Vol. I, Part 3, pp. 55-105; on Metellus, p. 11.

F. M. Legge and K. W. Goadby, 1912, "Lead Poisoning and Lead Absorption," London, p. 30, citing family susceptibility likewise reported by Thomas Oliver, *Diseases of Occupation* (third edition), p. 142, and saying that people with fair complexion and red hair have been noted as more susceptible.

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

RACIAL DIFFERENCES AND PHYSICAL ANTHROPOLOGY

By DONALD A. SWAN

Racial differences in physical traits have been described as early as the beginning of dynastic times in Ancient Egypt. According to Coon (1939), "Egyptian painters and sculptors recorded faithfully, often in colors, the physical appearance of their living countrymen, as well as of many different kinds of foreigners."[1] However, the beginning of modern scientific work in racial anthropology[2] may be said to start in the late eighteenth century with the German scientist Johann Friedrich Blumenbach, who is described by some writers as "the Father of Anthropology."[3] Blumenbach (1775) assembled a large collection of skulls representing various races at the University of Goettingen and established the "foundations of race classification based on measurement."[4]

In the nineteenth century precise techniques of anthropometric measurement were developed. The Dutch anatomist Pieter Camper introduced the "facial angle," while the Belgian

[1] Carleton S. Coon, 1939, *The Races of Europe,* Macmillan, New York, pp. 91-98 and 432-433: "The Egyptian artists had a genius for accurate racial representation which emphasized characteristic features and eliminated non-essentials."

[2] Gerhard Heberer, 1963, "The History of Anthropology," in *Anthropology: A to Z* (edited by Carleton S. Coon and Edward E. Hunt), Grosset and Dunlap, New York, pp. 113-114: "As is true of almost all the sciences, allusions to anthropology may be found in the writings of the ancients (Aristotle, Galen). The term 'anthropology' goes back to Aristotle, but is not used again in antiquity. During the Middle Ages, no real progress could be made in the search for the place of man in nature."

[3] Alfred C. Haddon, 1934, *History of Anthropology,* Watts, London, p. 13.

Gerhard Heberer, *op. cit.,* p. 114: "Johann Friedrich Blumenbach (1752-1842) is regarded as the actual father of anthropology. His most important work, *De generis humani varietate nativa,* was the foundation for racial morphology."

[4] Johann Friedrich Blumenbach, 1775, *De generis humani varietate nativa,* Goettingen; Alfred C. Haddon, *op. cit.,* pp. 13-16.

Walter Scheidt, 1924-1925, "The Concept of Race in Anthropology," in *This is Race* (edited by Earl Count, 1950), Schumann, New York, p. 362: "It is Blumenbach's lasting service to have selected and brought together for use in anthropology whatever technical means for direct observation and inquiry that his age afforded. He probably was the first to pursue craniology according to a plan; and he paved the way for exploiting comparative anatomy, physiology, and psychology in the science of human variation as far as such a thing was possible in his day."

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

TABLE I RACIAL CLASSIFICATION OF MODERN M

PHYSICAL TRAIT	CAUCASOID
1. SKIN COLOR	light brown (olive), pale white, pink, ruddy
2. HAIR COLOR	rarely dead black, all lighter shades
3. HAIR FORM	never woolly, usually wavy or straight, sometimes loosely curled
4. EYE COLOR	never black, all lighter shades
5. EYE FORM	———
6. NOSE FORM	usually high and narrow, sometimes medium, nasal index usually leptorrhine, never platyrrhine
7. NASAL INDEX	———
8. HAIR QUANTITY	beard and body hair moderate or abundant
9. HAIR TEXTURE	usually medium to fine, rarely very coarse
10. HEAD FORM	———
11. FACE FORM	———
12. FACIAL PROTRUSION	(prognathism): usually lacking
13. EAR FORM	———
14. LIP FORM	membranous lip thickness: medium to thin, little eversion
15. STATURE	———
16. BODY BUILD	———
17. CHIN	chin prominence: pronounced to medium
18. PELVIS	broad in both sexes
19. TEETH	———
20. BREAST FORM	(female): usually hemispherical
21. BUTTOCKS	(female): usually prominent
22. SWEAT GLANDS	———
23. SACRAL SPOT	———
24. BLOOD GROUP	usually much higher in A than in B
25. FINGERPRINTS	palmar main line formula: most commonly 11.9.7

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

N (Hooton, 1946, pp. 575-576, 619-620 and 633)

NEGROID	MONGOLOID
dark brown to black	yellow or yellow brown
black	black
woolly or frizzly	straight, coarse texture
dark brown to black	medium to dark brown
———	opening slit-like, slanting; upper lid with total Mongoloid fold, or internal epicanthic fold: heavy-lidded, fat embedded, not much recessed
bridge and root usually low and broad; short, profile concave or straight, rarely convex; tip very thick and usually elevated; alae thick and flaring; septum usually convex	infantile, root very low, no nasion depression, bridge low and of medium breadth; tip short and medium in thickness; alae medium; profile variable but usually concave or straight
85 and over	———
usually short on head, sparse beard, little body hair	———
———	beard and body hair least developed of all races
prevailingly dolichocephalic with projecting occiput and rounded forehead; small brow-ridges	———
usually somewhat short in unmixed forms, with malars more prominent than in Whites, chin rounded and receding	malars with strong frontal and lateral jut, usually covered with fat pad.
(prognathism): often marked in subnasal region	———
usually short wide ear, with narrowly rolled helix and little or no lobe	———
integumental lips thick, upper convex; membranous lips usually puffy and everted, marked lip seam	———
———	variable, but usually averaging under 167 cm.
upper extremity: relatively long forearm, relatively short thumb lower extremity: usually relatively long lower leg, poorly developed calf, projecting heel, low foot arch	quite variable, but usually broad shoulders, long trunk, short extremities; calves of legs well developed
———	———
relatively narrow	———
———	shovel incisors usually present
(female): usually conical	———
(female): usually less projecting than in Whites	———
more numerous than in Whites	———
———	(Mongoloid spot): generally observable in early years
usually very high in O, low in A and B	usually high in B; r = .25 or more
palmar main line formula: usually 7.5.5	———

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

astronomer Quetelet made statistical studies of human physical characteristics and devised the concept of the "average man."[5] The Swedish anthropologist Anders Retzius introduced various cephalic and cranial indices, which gave impetus to the new science of craniology.[6] In due course methods were devised for measuring and describing the skeleton (osteometry) and the human body and its parts (somatometry).[7] It is the purpose of this article to enumerate and describe briefly some of the racial differences in physical and physiological traits which have been reported in the scientific literature in recent years.

I

Following the development of scientifically accurate methods of research and quantitative measurement, considerable knowledge has been gained of the physical characteristics and their variability in the races of man. Physical anthropologists describe morphological racial differences by means of absolute metric values obtained from measurements of the head and body (or cranial and skeletal remains), by indices determined from ratios between various absolute measurement values, and by qualitative descriptions.[8] In the course of numerous investigations, racial differences have been demonstrated and described, both quantitatively and qualitatively, in morphological characteristics, such as: skin color, hair color, hair form and texture, eye color, nose shape, head shape, facial form, degree of facial protrusion, lip thickness, stature, body build, and so on.[9] Hooton (1946), for example, lists differences between the "three primary races" in some 25 physical traits (see Table I).[10] And although, over the past couple of decades, the primary interest of physical anthropologists has shifted away from the traditional anatomical studies, recent investigations have revealed marked differences between American Whites and American Negroes in volume of the sacral canal[11] and

[5] Alfred C. Haddon, *op. cit.*, pp. 15-37; Walter Scheidt, *op. cit.*, pp. 354-391.

[6] T. K. Penniman, 1952, *A Hundred Years of Anthropology,* Duckworth, London, p. 76.

[7] Gerhard Heberer, 1959, "Methoden der Anthropologie," in *Anthropologie: A zu Z* (edited by G. Heberer, G. Kurth and I. Schwidetzky), Fischer, Frankfurt, pp. 114-115.

[8] *Ibid.*, pp. 114-122.

[9] Rudolf Martin and Karl Saller, 1957, 1959, 1962, *Lehrbuch der Anthropologie,* Gustav Fischer, Stuttgart.

[10] Earnest A. Hooton, 1946, *Up From the Ape,* Macmillan, New York, pp. 575-576, 619-620 and 633.

[11] Stanley M. Garn, 1961, *Human Races,* Thomas, Springfield, Illinois, p. 27.

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

in bone density.[12] Garn (1961) interprets the higher weight/volume ratio of the Negro skeletons as indicating "a greater degree of mineralization," which "is in the opposite direction of what might be expected on a purely nutritional basis."[13]

Racial differences have also been demonstrated in physiological processes such as growth and maturation rates. Differences between Whites and Negroes in body proportions and growth rate of the limbs are well established during fetal life. According to Coon and Hunt (1963):[14]

> . . . Negro fetuses of the third month show a smaller height of the cranium, a broader nose, smaller hips, longer arms, and greater length of the forearm than do Whites, in much the same way as the adults differ. Negro babies show earlier ossification than do Whites, and are also more precocious in motor development.

Garn (1961) also notes that racial growth differences have been reported in "the age at calcification of some of the bony nuclei of the wrist, foot and leg which appears to be earlier in American Negroes and in selected African populations."[15]

Physiological differences have also been described in the resistance of the skin to electrical stimulation of American Whites and American Negroes,[16] and in the basal metabolism rates of Whites, Maya Indians, Chinese and Japanese.[17]

[12] M. Trotter, G. E. Broman and R. R. Peterson, 1959, "Density of Cervical Vertebrae and Comparison with Densities of Other Bones," *American Journal of Physical Anthropology,* Vol. XVII, pp. 19-25; Raymond U. Seale, 1959, "The Weight of the Dry Fat-Free Skeleton of American Whites and Negroes, *American Journal of Physical Anthropology,* Vol. XVII, pp. 37-48.

[13] Stanley M. Garn, *op. cit.,* p. 27.

Earnest A. Hooton, *op. cit.,* p. 746: "The texture of the Negro skull, when in a relatively fresh condition, seems closer, denser, and more ivory-like than the skull texture of Whites and Mongoloids."

[14] Carleton S. Coon and Edward E. Hunt (Editors), 1963, *Anthropology: A to Z,* Grosset and Dunlap, New York, p. 111; Rita Hauschild, 1937, "Rassenunterscheide zwischen Negriden und Europiden Primordialcranien des 3-Fetalmonats," *Zeitschrift für Morphologie und Anthropologie,* Vol. XXXVI, pp. 215-279.

[15] Stanley M. Garn, *op. cit.,* p. 29: "This may ~~represent~~ a simple difference of patterning, or it may be associated with osseous and neuromuscular advancement during infancy as Dean has demonstrated."

[16] Laverne C. Johnson and Norman L. Corah, 1963, "Racial Differences in Skin Resistance," *Science,* Vol. CXXXIX, No. 3556, pp. 766-767.

[17] Earnest A. Hooton, *op. cit.,* pp. 541-542; Morris Steggerda, 1941, *Maya Indians of Yucatan,* Publication No. 531, Carnegie Institute, Washington, D.C.; George D. Williams, 1931, *Maya-Spanish Crosses in Yucatan,* American Archaeology and Ethnology Papers, Peabody Museum, Vol. XIII, No. 1.

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

Schwidetzky (1959) suggests that further research may uncover "regionally varying genetic factors in the case of many other metabolic processes."[18]

II

The extent to which racial differences in morphological traits are genetically determined has frequently been a source of dispute. Boas (1912) argued that the cephalic index of Jewish and Sicilian immigrants to the United States changed as a result of the change in environmental conditions. He contended that "we must speak of a plasticity (as opposed to permanence) of types."[19] However, subsequent statistical analyses of Boas' findings by Morant and Sampson (1936),[20] and by Fisher and Gray (1937),[21] cast doubt on the accuracy of some of the measurements and on the conclusions reached. Shapiro (1939) later compared Japanese immigrants to the U.S. with their relatives who remained in Japan and found an increase in stature in the children of the migrants. Nevertheless, Shapiro emphasized that the change in stature could not exceed a certain limit and, further, that the migrants remained Mongoloid in their other physical features.[22]

Clark (1956) estimated the heritability of 49 standard anthropometric characters (as listed in R. Martin's *Lehrbuch der Anthropologie*) by comparing the within-pair variances for 37 dizygous and 44 monozygous twin pairs. For 45 of the 49 anthropometric traits the heritability estimates exceeded .50 and sometimes reached .90. These included stature, arm length, facial height, nose breadth and height, and head length, breadth and height.[23] Gates (1946, 1958, in two extensive reviews of the literature on the inheritance of anthropological traits, also concluded that "most anthropometric measurements are determined in large measure by heredity."[24]

[18] Ilse Schwidetzky, 1959, *Anthropology: A to Z, op. cit.*, p. 287.

[19] Franz Boas, 1912, "Changes in Bodily Form of Descendants of Immigrants," *Race, Language and Culture,* Macmillan, New York, p. 71.

[20] G. M. Morant and O. Samson, 1936, "An Examination of Investigations by Dr Maurice Fishberg and Professor Franz Boas Dealing with Measurements of Jews in New York," *Biometrika,* Vol. XXVIII, pp. 1-31.

[21] R. A. Fisher and H. Gray, 1937, "Inheritance in Man: Boas' Data Studied by the Method of Analysis of Variance," *Annals of Eugenics,* Vol. VIII, pp. 74-93.

[22] Harry L. Shapiro, 1939, *Migration and Environment,* Oxford, New York.

[23] P. J. Clark, 1956, "The Heritability of Certain Anthropometric Characters as Ascertained from Measurements of Twins," *American Journal of Human Genetics,* Vol. VIII, pp. 49-54.

[24] R. Ruggles Gates, 1946, *Human Genetics,* Macmillan, New York, Vol. II, pp. 1342-1413; R Ruggles Gates, 1958, *Race Crossing,* Istituto Gregorio Mendel, Rome, p. 115.

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

III

Gates (1958) points out that "the structures we measure and compare in skulls and bones are biochemically moulded, the differences arising through changes in the genes which control the biochemistry of development."[25] In recent years anthropologists have shifted their interest from anatomical traits to biochemical and serological traits whose mode of inheritance can be more accurately determined. Coon (1962), for example, writes that "in studying racial differences in living men, physical anthropologists are now relying less and less on anthropometry and more and more on research in blood groups, hemoglobins, and other biochemical features."[26] Racial differences have recently been demonstrated between European and American Whites and African and American Negroes in frequency of the three major haptoglobin (hemoglobin-binding) proteins;[27] between Chinese, Japanese and Whites in drug-sensitivity;[28] between American Whites and Chinese in beta-aminoisobutyric acid excretion;[29] and between a large number of racial and population groups in PTC (phenylthiocarbamide) tasting acuity.[30]

In 1901 Landsteiner discovered the ABO blood group system. The subsequent finding that the distribution of O, A, B and AB blood types varied amongst different races and populations opened

[25] R. Ruggles Gates, 1958, *Race Crossing, op. cit.*, p. 54.

[26] Carleton S. Coon, 1962, *The Origin of Races*, Knopf, New York, p. 662: ". . . Races differ in the extent and manner in which the fine subcutaneous muscles of the lips and cheeks have become differentiated from the parent mammalian muscle body; in the chemical composition of hair and of bodily secretions, including milk; in the ways in which different muscles are attached to bones; in the sizes and probable secretion rates of different endocrines; in certain details of the nervous system, as, for example, how far down in the lumbar vertebrae the neural canal extends; and in the capacity of individuals to tolerate crowding and stress."

[27] O. Makela, W. A. Erikson and B. Lehtovaara, 1959, "On the Inheritance of the Haptoglobin Serum Groups," *Acta Genetica et Statistica Medica*, Vol. IX, pp. 149-166.

[28] Earnest A. Hooton, *op. cit.*, pp. 562-563.

[29] J. de Grouchy and H. E. Sutton, 1957, "A Genetic Study of Beta-aminoisobutyric Acid Excretion," *American Journal of Human Genetics*, Vol. IX, pp. 76-80; S. M. Gartler, I. L. Firschein and B. S. Kraus, 1957, "An Investigation into the Genetics and Racial Variation of BAIB Excretion," *American Journal of Human Genetics*, Vol. IX, pp. 200-207; S. M. Gartler, I. L. Firschein and T. Gidaspow, 1956-1957, "Some Genetical and Anthropological Considerations of Urinary Beta-aminoisobutyric Acid Excretion," *Acta Genetica*, Vol. VI, pp. 435-466; H. E. Sutton and P. J. Clark, 1955, "A Biochemical Study of Chinese and Caucasoids," *American Journal of Physical Anthropology*, Vol. XIII, pp. 53-66.

[30] L. E. Hoyme, 1955, "Genetics, Physiology, and Phenylthiocarbamide," *Journal of Heredity*, Vol. XLVI, pp. 167-175, Ilse Schwidetzky (Editor), 1962, *Die neue Rassenkunde*, Fischer, Stuttgart, pp. 58-68.

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

TABLE II

RACIAL DIFFERENCES IN BLOOD TYPE GENE FREQUENCIES (Walter, 1962)

Blood Type	Europids (Europe)	Europids (outside Europe)	Mongolids	Indianids	Eskimids	Negrids	Australi and Melanesi
A	26	28	22	15	29	15	27
B	12	20	25	2	2	14	5
O	62	52	53	83	69	71	68
M	58	49	57	78	80	52	21
N	42	51	43	22	20	48	79
MS	24	15	10	24	19	15	1
Ms	33	41	51	58	62	40	22
NS	8	12	6	4	0	7	5
Ns	35	32	33	14	19	38	72
P	52	58	36	34	25	65	25
C	49	60	71	49	65	15	78
D	62	80	96	95	100	78	96
E	13	14	16	46	32	10	14
CDE (R_z)	1	1	1	2	2	0	4
CDe (R_1)	46	57	76	47	63	11	68
Cde (r′)	2	2	0	0	0	4	6
cDE (R_2)	11	12	13	43	30	8	10
cdE (r″)	1	1	2	1	0	2	0
cDe (R_0)	4	10	5	3	5	59	12
cde (r)	35	17	3	4	0	16	0
K	<4	<4	0	<3	0	<1	<1
Lu^a	3	0	<1	1	0	6	0
Le^a	40	50	50	<20	0	40?	<10
Fy^a	41	70	91	67	87	4	100
Jk^a	52	?	65	50	72	62	?
Di^a	0	0	<3	13	<1	0	0
Hp^1	40	34	37	57	31	58	40

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

up a new field of anthropological inquiry.[31] During the past 50 years 10 additional blood groups have been discovered and applied to anthropological research. Walter (1962) recently tabulated and summarized the distribution of blood group genotypes in the major racial groups (see Table II).[32] When serological taxonomies based solely on the ABO system were first proposed they appeared considerably at variance with racial taxonomies based on morphological traits. However, with the discovery of additional blood group systems, "serological and geographical taxonomies became more nearly reconciled."[33]

IV

Recent emphasis on the biological processes of race formation has resulted in a number of carefully conducted studies on racial differences in physiological adaptation to the climatic extremes of heat, cold and altitude. As a consequence, racial differences have been demonstrated between American Whites and Negroes in subcutaneous fat thickness and distribution,[34] and in susceptibility to frostbite;[35] between American Whites and Negroes, Eskimos and Indians in metabolic acclimatization to cold;[36] between

[31] Hubert Walter, 1962, "Die Bedeutung der serologischen Merkmale für die Rassenkunde," in *Die neue Rassenkunde* (edited by Ilse Schwidetzky), *op. cit.*, pp. 135-232.

[32] *Ibid.*, p. 231.

[33] Stanley M. Garn, *op. cit.*, p. 49: "The geographical distribution of the various blood groups is not identical with racial distribution, and the zones often overlap. However, there are some populations that are characterized by special blood-group combinations. . . . Ottenstein, Wiener and Boyd attempted to classify races according to serological characteristics, and their major subdivisions were similar to those produced by the morphological-typological approach. . . . However, attempts at further subdivisions through the use of additional serological characteristics did not lead to a plausible system."

[34] Paul T. Baker, 1959, "American Negro-White Differences in the Thermal Insulative Aspects of Body Fat," *Human Biology*, Vol. XXXI, No. 4, pp. 316-324; R. W. Newman, 1956, "Skinfold Measurements in Young American Males," *Human Biology*, Vol. XXVIII, No. 2, pp. 154-164.

[35] L. M. Schumann, 1951-1952, "Epidemiology of Frostbite," *Army Medical Research Laboratory*, Report No. 113; T. Adams and B. Covino, 1958, "Racial Variation to a Standardized Cold Stress," *Journal of Applied Physiology*, Vol. XII, p. 9.

[36] G. M. Brown and J. Page, 1952, "The Effect of Chronic Exposure to Cold on Temperature and Blood Flow of the Hand, *Journal of Applied Physiology*, Vol. V, No. 5, pp. 221-227; M. F. Coffee, 1955, "A Comparative Study of Young Eskimo and Indian Males with Acclimatized White Males," in *Cold Injury* (edited by M. I. Ferrer), J. Macy Foundation, New York; H. T. Hammel, 1960, "Response to Cold by the Alcaluf Indians: A First Report on a 1959 Expedition," *Current Anthropology*, Vol I, No. 2, p. 146; J. P. Meehan, 1955, "Individual and Racial Variations in a

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

TABLE III

RACIAL DIFFERENCES IN RESPONSES TO HEAT AND COLD

(Garn, 1961)

Author	*Sample*	*Findings*
Hammel *et al.* (1959)	8 Central Australian aborigines 6 Control "Whites" 9 Tropical Australian aborigines	Small but important differe in thermal and metab responses to moderate c during sleep
Scholander *et al.* (1958)	5 Australian Whites 6 Central Australian aborigines	Europeans maintained b heat by increased muscu movement during sleep
Wyndham and Morrison (1958)	2 Unacculturated Bushmen 2 Europeans	No important differences fo in reponse to moderate n cold
Hammel (1960)	9 Alacaluf	Markedly increased metab response to night cold, per ent elevated BMR
Adams and Covino (1958) (see also) Brown and Page (1952)	7 Negro soldiers 7 "Caucasian" soldiers 6 Anaktuuk Eskimos	Systematic Negro-White-Esk differences in skin temperat and BMR during two-h exposure to cold
Lampietro *et al.* (1959)	17 White and 16 Negro volunteers matched for body size and composition	Fewer rewarming cycles lower finger temperatures Negro subjects exposed moderate cold
Bass *et al.* (1959)	16 East Indians 16 U.S. Negroes 23 Chinese 17 U.S. Whites 8 Eskimos	Marked racial differences plasma volume and bl volume especially for Esk of questionable relationship climatic adaptation
Baker (1958)	40 pairs of White and Negro soldiers matched for body composition and size	Negroes displayed a hig physiological tolerance to humid conditions, but heated more under hot dry conditi
Wyndham *et al.* (1952)	8 African mine laborers White data from the literature	Lower sweating rates, lo heart rates and lower re temperatures for Africans

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

American Whites and Negroes, European Whites, African Negroes and African Bushmen in sweating rates and heat tolerance;[37] and between South American Whites and Indians in physiological adjustment to altitude.[38] Garn (1961) lists nine recent studies on racial differences in responses to heat and cold alone (see Table III).[39] Newman (1961) interprets these findings as evidence of "human adaptation to environmental extremes," which "necessarily involves phenotypic alterations of morphological and physiological traits that are largely continuous variables,"[40] and concludes:

> Viewed in terms of the great blocks of humanity, it is apparent that Negroes do not do well in extreme cold and may not flourish at high altitude. They seem to be well equipped, however, to deal with heat, at least of the moist tropical forest variety. Mongoloid people, on the other hand, seem best equipped to cope with the cold; it may not be a matter of sheer coincidence that the high-altitude areas of the Himalayas and Andes are occupied by quasi-Mongoloid people. . . . Whites, who have pre-empted most of the best lands of temperate climate, do well in at least moderate cold and desert heat, but their history in the tropics leaves them less than unqualified successes.

V

In summary, racial differences are known to exist in almost every area of human anatomy for which comparative data are available, as well as in metabolic activity and biochemical

Vascular Response to a Cold Stimulus," *Military Medicine,* Vol. CXVI, No. 5, pp. 330-334; P. F. Scholander, 1955. "Evolution of Climatic Adaptation in Homeotherms," *Evolution,* Vol. IX, pp. 15-26.

[37] Paul T. Baker, 1958, "Racial Differences in Heat Tolerance," *American Journal of Physical Anthropology,* Vol. XVI, No. 3, pp. 287-306; M. L. Thompson, 1954, "A Comparison Between the Number and Distribution of Functioning Eccrine Sweat Glands in Europeans and Africans," *Journal of Physiology,* Vol. CXXIII, pp. 225-233; C. H. Wyndham, W. Bouwer, M. G. Devine and W. E. Paterson, 1952, "Physiological Responses of African Laborers at Various Saturated Air Temperatures, Wind Velocities, and Rates of Energy Expenditure," *Journal of Applied Physiology,* Vol. VI, pp. 290-298; C. H. Wyndham and J. F. Morrison, 1956, "Heat Regulation of MaSarwa (Bushmen)," *Nature,* Vol. CLXXVIII, pp. 869-870.

[38] C. Monge, 1948, *Acclimatization in the Andes,* Johns Hopkins, Baltimore, Maryland; C. Monge, 1954, "Man, Climate, and Changes of Altitude," in *Recent Studies in Bioclimatology* (edited by F. Sargent and R. G. Stone), Meteorological Monographs, Vol. II, No. 8, pp. 50-60.

[39] Stanley M. Garn, *op. cit.,* p. 67.

[40] Marshall T. Newman, 1961, "Biological Adaptation of Man to His Environment: Heat, Cold, Altitude, and Nutrition," *Annals of the New York Academy of Science,* Vol. XCI, No. 3, p. 630

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

functioning. Differences between various racial groups have been demonstrated in morphological traits, such as skin pigmentation, hair color, hair form and texture, eye color, nose shape, head shape, facial form, degree of facial protusion, lip thickness, stature, body build, and so on. Racial differences have also been found in physiological processes, such as growth and maturation rates and basal metabolism. With the recent shift in emphasis from anthropometry to biochemical and serological research, racial differences have been measured and described in haptoglobin proteins, drug sensitivity, PTC tasting acuity, and distribution of blood group types. Studies of migrants have shown that environmental influence on most morphological characteristics is negligible, while twin and family studies have further demonstrated that anthropometric traits are determined in large measure by heredity. Recent research on racial differences in physiological adaptation to the extremes of heat, cold and altitude lend support to the view that genetic adaptations to the extremes of climate explain many racial differences in physical traits.

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

ETHNOLOGICAL ELEMENTS OF THE SOUTH-EASTERN MEDITERRANEAN AND NORTH-EAST AFRICA

By R. GAYRE OF GAYRE

LEBANON

The Lebanese are distinctly European in every sense of the word. The basic type is *Mediterranean*, of the sub-form which is associated with Europe rather than that of the *Eastern Mediterranean* branch. In addition there is some Armenoid and, perhaps, Dinaric in evidence. But on top of this there is a very evident Nordic infusion, which is to be seen in the clear, fair skin, light eyes and fair hair of a large number of people. The reception of the President at Beirut airport by a military band and a guard of honour (composed of about three companies) on the 7th of October could have been in southern France—the illusion being all the greater because of French-style uniforms, weapons, instruments, drill and words of command. There was nothing non-European about these men. The Lebanese have a very large Christian element and this increases the European character of the country.

The population of Lebanon is exploding; the workers questioned invariably seemed to have seven to ten children.

Of all countries in the near East, Lebanon is nearest to Israel in its character of energy and forward drive, and this may not be solely due to fortuitous factors such as foreign investments in the country. At least in part it may be due to the nature of the Lebanese which makes them anxious to encourage such investment and use it to the full.

The total impression left on one is of an ethnic group which is an extension of the Mediterranean race with the addition of important Nordic, Armenoid and Dinaric elements.

CYPRUS

The Greek population is typically Mediterranean but has a certain Nordic element, as is clear from the occurrences of grey and blue eyes, occasionally along with fair hair. The Dinaric or Armenoid element seems to be a little less marked than it is in the Lebanon, and certainly much less so than it is among the Turkish population, as the few members of which who were seen were strongly Armenoid—this, of course, is to be expected as it is characteristic of the Turks generally.

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

Very occasionally, as is the case also in Lebanon, a person may be found with a somewhat broader and flatter nose than usual, or with an inclination to frizzy hair. Where not due to mutations, this probably results from a slight amount of Negroid seepage, perhaps in Turkish times when Negroid slaves were imported—not all of the males of whom were castrated[1] and so some of them were able to breed. However, such occurrences in Cyprus are not significant and should be ignored in any assessment of the ethnology.

These occasional occurrences of persons with some Negroid traits might be slightly more marked in Lebanon, which is to be expected since that country was much longer under Turkish rule, and a gradual seepage from Africa is easier by land connections than it is in the case of an island. Nevertheless the Negroid genes must be negligible even in Lebanon.

ISRAEL

A striking number of fair types are encountered in Israel. For instance at Tel Aviv many of the police, military and customs officers are distinctly or partially Nordic. Light, wavy and rather fine hair is encountered frequently, as well as the deeper tones typical of the Mediterranean, Armenoid and Mediterrano-Armenoid types, especially this latter combination which is characteristic of Jewry. Tel Aviv, therefore, presents an appearance hardly to be distinguished from that of any normal central European city.

In the course of this visit to Palestine we travelled to Haifa,[2] and from there to what is now called Akko, better known in Europe as St Jean d'Acre.

After the fall of Jerusalem, St Jean d'Acre was the last foothold of the Crusaders in the Holy Land before the final collapse of the Kingdom of Jerusalem. Here the ancient orders of chivalry, the Knights of the Temple, St Lazarus, St Thomas, St John and so on, had their barracks, hospitals and churches. The enormous crypt of the Order of John has been excavated below the existing buildings in the centre of the city. With Dr Goldman, curator of the museum, we were able to identify on the foreshore north of the town, which has shrunk in size since Greek and Crusader times, the foundations of the walls of that section of the fortifications which is shown on medieval maps as having been manned by the Knights of the Temple and of St Lazarus.

[1] Eunuchs cost ten times more than those which had not been so treated.

[2] See "Northern European Elements in the Eastern Mediterranean" by R. Gayre of Gayre, THE MANKIND QUARTERLY, Vol. IV, No. 2, October-December 1963, pp. 63-69.

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

Today the city stands on the southern section of what was the original Crusader town, and the older part is largely confined within the main walls of the inner fortifications. (The walls held by the Knights of the Temple, St Lazarus and other orders of chivalry lie beyond these to the north, extending to the sea). This is the distinctly Turkish city which arose on the foundations of the capital of the Crusaders.

Inside the older walled part of the city there are 6500 Arabs and 500 Jews. Many more Jews live in the surrounding suburbs. It is interesting to note that here, unlike among the Arabs generally, there are clear signs of miscegenation. Not only is the over-all complexion dark but there are also persons with perceptible Negroid characters. Nevertheless it should be noted that even here there are children with light eyes and fair hair.

We have here an inbreeding Akkonese Arab population, and the occurrence of these hybrid Caucasoid-Negroid Arabs is of considerable interest. The Turkish rulers and upper class not only had polygamous marriage and a system which allowed concubinage—in neither of which did they necessarily restrict themselves to women of their own stock—but they also had access to female slaves, many of whom came from the Nilotic and so-called "Hamitic" populations of the Sudan and Ethiopia.

As we shall show later, these two strains in themselves would not necessarily introduce extensive *Negroid* elements, but they would assist in introducing nigrescent genes for a darker colour. In addition, however, real Negro slaves would have been brought from such places as the Sudan, or indirectly through Egypt; for the Arab slave raiders were operating all down the east coast of Africa and had centres at Zanzibar and adjacent mainland places from which the slaves were taken to the Sudan and sold.

Thus, under Turkish rule, domestic and other menial slaves of Negroid Bantu origin, from as far south as Tanganyika and beyond, could be found in places which normally had a White indigenous population, and St Jean d'Acre appears to have been such a place.

With the collapse of slavery and the fall of the Turks such Negroid strains not large enough to form distinct communities of their own have interbred with some of the darker non-Negroid Nubian, Sudanese and Ethiopian slave elements, and all of these have interbred with some of the Arab strains, until a mixed population has been achieved.

The population of the walled city of St Jean d'Acre, an isolated community, now further isolated by the ring of Jewish suburbs and settlements around the city, has become considerably inbred. Thus one is at once struck by the presence of dark strains, some of which are clearly Negroid, within a still predominantly Arab population. Ethno-genetic studies of the population of St Jean

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

d'Acre would certainly prove valuable. However, it must be emphasised that this population is not typical of the Arabic-speaking peoples of Israel in general.

JORDAN

The majority of the people are very fair and almost wholly Caucasoid. A few have light eyes and nearly all are Mediterranean, but many show evidence of Nordic infusion. The amount of Negroid infiltration is not great. This is partly explained by the fact that the Negroid types in Jordan form distinct communities and tend to interbreed among themselves. Thus, a full-blooded Negro on police duty at one of the gates of Jerusalem belonged to a Negro community of Nigerian origin who live in their own area and intermarry among themselves. In so far as any slight Negroid elements have entered the general population they are confined to the lowest classes.

The Arabs near Jerusalem, though not so fair as the very fair Christian Arabs of Galilee, are much fairer than the Arabs of southern Arabia. This, however, is evidently due to several causes. In the first place city dwellers are not sunburnt in the way that Bedouin and agriculturists are. This accounts for a superficial contrast. Secondly, it is possible that the Caucasoids in the hottest countries have had a mutation for increased nigrescence. This is a view I have shared with Professor Ruggles Gates as far as India is concerned and I see no reason to question the probability of it in countries such as southern Arabia, Egypt, the Sudan and Ethiopia. Lastly, of course, there has been a creep of some Melanoid genes into these populations, and this has resulted in an increase of darker skins in certain localities, situations and classes—notably in the lowest classes. It is generally the case that a large proportion of the darker people have regular Caucasoid features, and so it would seem reasonable to suspect that where this is not due to a mutation it is derived from the so-called "Hamites" of north-east Africa, or in cases where it is due to the drift of genes from the Negroid to the Caucasoid stock through miscegenation it is only those genes which control colour which have any marked survival value. Where the darker skin is accompanied by other traits of a Negroid origin there can be no doubt as to the source of the nigrescence, but often enough this dark complexion has come from these other sources.

However, it is necessary to stress that Negroid genes do not constitute any substantial part of the genetic inheritance of the Palestinian Arabs. Where they do occur they are mainly in one class and confined to particular localities.

We shall show later that it is probable that a large part of the dark colouring of the population of north-eastern Africa, where

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

it is not due to a mutation, is derived from a non-Negroid Melanoid foundation. We have postulated the Australoid as the source of this melanism. This would be a more likely source for the darker skins than a purely Negroid one. A Negroid origin for darker skin colour in the population should, therefore, only be postulated when dark colour is accompanied by other, typical, Negroid traits such as splayed nostrils, prognathism, frizzy and short hair, thick and everted lips, protruding and pear-shaped breasts in the women, and so on.

EGYPT

There is no gainsaying the fact that the Egyptians have a much greater variation of type and colour than the Palestinian Arabs. This is not unexpected since the Nile is a means of communication leading deeply into central Africa. However, although these diversities of type from fair to partly Negroid may be seen in the streets, this general impression requires to be modified by closer understanding of the issues involved.

Nubians have been brought into Egypt as slaves from time immemorial. With the ending of slavery the Nubians continued in their former occupations, and these tend to be followed from father to son. Thus the lower-ranking hotel staff, such as waiters and porters, are all Nubians who, if not native born in Egypt proper, are recruited from Nubia. The head waiters and the like are, with few exceptions, Egyptians. In the old quarter of Cairo many Nubians may be seen engaged in humble crafts. It seems quite clear that they are still a helot class in Egypt. While there is bound to be a certain amount of miscegenation, this is restricted by the fact that these dark Egyptians form a distinct class somewhere at the bottom of the social structure. It is now some generations since slavery existed in Egypt but there is little to indicate that any significant number of these darker, Nubian, types are climbing upwards to form part of the higher classes.

Although the Nubians are a dark people it should be emphasised that they are not typically Negroid in their features. They belong to the so-called "Hamitic" stock, which is in fact a cross between some form of Nilotic strain (perhaps originally evolved out of Australoid-Negroid crosses) and Caucasoid Hamites (the white Hamitic peoples of northern Africa). As a result they have features which are basically Caucasoid, but after long evolution in a hot climate the genes for nigrescence have come to replace those for fairness. However, they are rarely black and are more often than not dark brown, sometimes with a golden undertone. In this they differ considerably from the typical pure-bred Negro who is jet black or even blue-black in colour. Here, again, it is necessary to emphasise the need for a more intelligent under-

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

standing of colour. All peoples, white, black and brown alike, tend to label dark skin as synonymous with Negroid, whereas dark colouring may be from quite different sources, such as a mutation in a Caucasoid strain (as is likely to be the case in much of the caste Hindu population), or some ancient non-Negroid (probably Australoid) stock. Although we have suggested that the "Hamites" may have arisen from an Australoid-Negroid cross which in its turn has been crossed with Caucasoid, the fact is that Negroid elements are not present. Either they were never there in the first place—and so the cross is Australoid-Caucasoid—or they have been bred out. But the Nilotics have a Negroid element and they are of a type which is basically related to the "Hamites."

The Nubians have certain other features: a tendency towards thick lips, and a shape of skull which betrays a non-Caucasoid infiltration. Despite this, however, the Nubians should not be classified as Negroids, but rather as a balanced racial breed subsisting between the two great racial blocks of Caucasoids and Negroids, the foundation of whose stock is probably some form of Melanoid (non-Negroid and probably Australoid) crossed with Caucasoid.

In the tightly packed quarters of old Cairo where Nubians and Nubian-like Egyptians are most in evidence the majority of the inhabitants, nevertheless, have fair complexions and even brown or in some cases golden-brown hair. Therefore, we should not lose all sense of proportion and classify the Egyptians as part of a White-Black racial breed, a balanced cross-breed, as it seems clear that they are basically eastern Mediterranean in racial type.

The fairer elements in the population are largely due to the Copts, who are fundamentally a Caucasoid stock—as one would expect the descendants of the ancient Egyptians to be. Indeed some of the Copts are as fair as many central or even northern Europeans, and could not be distinguished from them. Many have light eyes, such as hazel and green. Owing to the tanning effect of the sun the women give a better indication of the true colour of the people than the men, as they do not normally work out of doors. It will be noted that the Coptic women, in common with many other Egyptian women, are definitely as white as large numbers of Europeans.

The ancient monuments of Egypt indicate that the women were light-skinned and the men, as we would expect, were tanned. The women are shown as white or cream-white and the men are terra cotta. This is of some significance, as the Copts claim to be the true descendants of the ancient Egyptians—the remnant, in fact, of upper class Egyptians after Islam overthrew the Christian state of Egypt. The lower classes of the Copts became Moslems—indeed they had to as their economic position was more vulnerable.

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

The fair complexion of the Egyptians—as distinct from the Coptic Egyptians—comes partly from the Copts and partly from the invading Arabs, Mamelukes and Turks. The Arabs, as we have already seen, are Mediterranean. Generally speaking we may say that the Turks are a Mediterraneano-Armenoid stock. The Mamelukes were recruited from slaves, but usually they were slaves only because they had been captured in war. A great many of them were of Christian and European origin. Indeed, it may well be due to the fact that the Mamelukes were Caucasoids—probably of stocks which were basically more inclined towards warlike ability —that they rose to the position of taking over the whole Islamic empire.

Reverting to the Copts it should, however, be pointed out that in this Christian community there are dark elements approximating to the Nubians. However, these are not of true Egyptian origin but result from the fact that the Ethiopian Church is orthodox and was until recently under a Coptic archbishop. Because of this there has been an infiltration of Ethiopian blood into the orthodox Coptic community of Egypt. Thus, strictly speaking, these incomers are not Copts at all but merely their co-religionists, and therefore these two types of Copts have to be distinguished. One is White, and ancient Egyptian in origin; the other is Ethiopian, of the so-called "Hamitic" type, and is a racial breed compounded in much the same way as the Nubian stock.

Incidentally it would be a mistake to suppose that there are no feelings of colour in the Egyptian population. One Caucasoid Egyptian head waiter expressed himself very forcibly on his darker-skinned staff, calling them names and confiding to me that he hated them.

The Copts form about a quarter of the population of Egypt and largely constitute the professional and leading elements of Egyptian society. Very little intermarriage takes place between them and the Moslem Arabs. This is not only because of the difference of religion but also because there is little desire on either side to intermarry. My informant, a Copt himself, said that this was in fact the case when the Bedouin first came in from the desert and began the Islamic conquest of Egypt, and it has continued to be so to the present time. Thus we can assume that the Copts are as nearly true representatives of the ancient Egyptians as we can expect to find anywhere in the Egyptian population. The name Copt means, of course, Egyptian.

What is so striking in Egypt, as in other underdeveloped countries, is the population explosion. Taxi drivers boast of having ten children, and the narrow, insanitary, overcrowded streets crawl with children. The number of pregnant women to be seen in the streets is very considerable. With the removal of slavery,

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

the prevention of decimation of populations by local wars and feuds, and the offsetting (if not complete suppression) of natural selection because modern drugs have prevented large-scale epidemics, populations are exploding throughout the Near and Middle East and Africa.

This means not only that the backward and so-called underdeveloped peoples are outpacing the advanced in the reproduction of their kind, but it also means the less gifted classes of these nations are reproducing successfully, whereas several generations ago this was not true. This can only lead to the production of less gifted and less energetic stocks of peoples, to the detriment, in fact, of the more gifted whose resources are employed to bring this state of affairs about. This is probably the most serious problem which faces mankind today, namely, how the élite is to reproduce itself rather than the classes and stocks which have little inherited ability to contribute to the effort of advancing civilisation.

The evil of slavery lies not only in the degradation of humanity which it brings about, but also in the fact that it transfers people into the ambients of foreign stocks, among whom they are partly absorbed—and thus racial miscegenation occurs. I do not share the common view that complete racial mixture is inevitable, especially with increased travel, or that it is desirable. In multiracial societies, social segregation and caste systems arise which very effectively offset the effects of increased contact. Miscegenation merely breaks up the unity of characters in any stock and introduces a great range of traits, thus making physical as well as temperamental and intellectual unity of the stock more difficult—in so far as these qualities are dependent on the genetic heritage—while, at the same time, destroying the character of the social inheritance. Racial mixture acts within an established human group in much the same way as a breakdown of the ecological balance in nature.

Much as miscegenation is to be discouraged for these very obvious and practical reasons, we have to realise that along the frontiers of the great racial blocks (in this case the Caucasoids and the Melanoid African peoples) mixed groups have arisen which are in various degrees of balance and imbalance. Thus, in the Middle East, Egypt, northern Africa, the Sudan and Ethiopia a racial shatter belt has been created. If slavery had not existed it is doubtful if Nubian and other African colonies would have been created in Egypt—and so the Egyptians would have been more Caucasoid today than in fact they are. In the working class areas of Cairo we estimated that one in three persons had some trace of "African" blood. This was often only slight, and some of those who showed actual traces of Negroid origins had many features which were Caucasoid. But as is to be expected, at the other end of the scale there were some who had an accumulation of non-

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

Caucasoid characters—although it would be hard to classify even these as pure Negroid.

THE SUDAN

The Sudanese are clearly darker and more Negroid than the Egyptians—although here again we have the same problem of a wide variety of types, varying from the fair-skinned Arabs to the darker people with broad nostrils and frizzy hair. In the past there has been a continuous seepage of ancient Egyptian blood into the Sudan, followed by that of the later Arabs, so that at one time, at any rate, the rulers were largely Caucasoid. The peoples they conquered and enslaved were Nilotic and "Hamitic" tribes, and later these elements were supplemented by true Negroids, most of them brought in as slaves from much further afield. The incidence of slavery has therefore been a malign one in so far as it has created a mixed population of widely divergent characters. That the culturally dominant (and originally White) Arabs have not been absorbed by the Black substratum is probably due to several causes. First of all, slaves cannot breed freely and to the normal extent they would do otherwise. The fact that a fairly high proportion of the males were always castrated also cut down their reproduction. Secondly, Caucasoid males could breed from female slaves, and so spread White genes in the population as a whole. Finally, segregation due to ability has probably weighted leadership and ability towards the more rather than the less Caucasoid—and this situation is likely to continue. Therefore, short of some bloody revolution, such as that experienced by the Watutsies in east central Africa, it would seem that in the Sudan, as in Egypt, more or less permanent segregation is likely on social lines. These in turn go back to actual educational and leadership differences, which, again, are due to genetic and, in ultimate, racial qualities. It seems, therefore, purely Utopian to expect the darker sub-strata in Sudanese society or the dark tribes of the southern Sudan (Equatoria) to take over the leadership of the country—although, naturally, there are intelligent persons among them who are capable of leadership. The *overlap* which exists between all racial groups infers that this must be so—but it is doubtful if the darker southern peoples of the Sudan can be expected to throw up as numerous a leadership class as the Moslem Arabs of the north.

It should be noted that it is government policy in most of the countries of north-east Africa (as well as elsewhere in Africa) to "play down" the racial and tribal differences in their populations, as well as to discourage, or at least not encourage, tribal leadership and development, in the interest of strongly centralised states. This means, in effect, that tribal character and culture are being destroyed. As tribal affiliations become less important in

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

the town-dwelling populations, tribal crossing will take place with ever increasing frequency. Nevertheless it is unlikely that genetic segregation will not occur if the tribes in question represent distinctly different types. Although a unified culture may result (where now there is great diversity), the wide genetic differences and the social consequences of genetic segregation will remain. Instead of social segregation on a geographical or vertical basis represented by differences of tribal culture and racial character, segregation of a social or horizontal type will arise—in other words a class structure, in which, for instance, Arab culture and Arab racial types will probably form an upper layer and an Arabised native culture of Melanoid racial types will form a lower layer with the Negroids in its lower half.

It is unlikely, however, that any such complete disintegration of the tribal and racial differences can occur in the foreseeable future, and so it is profitable to mention some of the more typical racial types of the Sudan, apart from the Nilotics in the south who are not of significant importance in the leadership of the country.

Besides the more normal Arab element to which we have referred there are other types. For instance, on approaching the borders of Ethiopia at Kassala, a province which lies south-east of Khartoum, the Fuzzy Wuzzies begin to appear as a significant part of the population They are found particularly in the region close to Port Sudan. They were so named by the British troops in the Sudan war. The Fuzzy Wuzzies were a brave enemy and are always spoken of with respect—for instance in Kipling's poems. They earned their name because they train their hair to fluff out all round the head. Although artificially acquired, this is a trait of some ethnological significance as it is unlikely that Negroes could encourage such a growth. This longer hair indicates only two possible sources of origin—Caucasoid and Australoid.

That there is Caucasoid blood in the population goes without saying. But it seems necessary to postulate a dark strain other than Negroid in north-eastern Africa to account for the general lack of Negroid features in large sections of the population. The country is so unbearably hot that natural selection is weighted against the Caucasoids in favour of the Negroids. If the over all darkness of the population is due solely to Negroid genes, we would therefore expect to find all the Negroid traits represented in substantial proportions, as well as the segregation out of a significant proportion of pure Negroids. Since this is not the case it seems that we must look to another dark stock. When we consider that these people are capable of growing longer hair than is normal in Negroids, that features which resemble those of the Australoids are sometimes seen, and that Negroid prognathism, thick, everted lips and broadly splayed nostrils are not unduly

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

common, then it seems very probable that there is a basically non-Negroid Melanoid element in the population, and it appears reasonable to suggest that this is Australoid rather than anything else.

The west coast of the Red Sea is an inhospitable one. The shore is fringed with coral reefs and it is only where these are pierced that ports can develop, as formerly at Suakim and now at Port Sudan. From time immemorial, therefore, these places have been ports of entry into north-eastern Africa from Arabia. We would thus expect to find fairer populations at such ports than elsewhere. In fact, however, this is not the case. As elsewhere in the Sudan, there is a great variation of colour and racial type, from the light skins and fine features of the Arabs, to the black skins and African features of others. Nevertheless, the majority of the dark-skinned individuals have fine Caucasoid or partly Caucasoid features. Furthermore, where this is not the case, or the Caucasoid features are not so marked, the African features are not really Negroid.

Time and again we have been forced to the conclusion that this nigrescence is of some origin other than Negroid, perhaps Australoid. The strong supra-orbital ridges (instead of the bulging forehead), the lack of prognathism, and the ability to grow hair of some length, such as in the case of the Fuzzy Wuzzies, all suggest some Black racial element, from a non-Negroid stock, mingling with the Caucasoid—although, naturally, Negroid elements exist and will be found at all times in the population.

The very tall stature found among these Black peoples of the Sudan (and radiating out therefrom) is probably due to a source other than Negroid. For instance, it is characteristic of the Watutsies living in the Ruanda-Urundi area of central Africa—and they are an intrusive, conquering aristocracy of non-Negroid origin, related to the northern Nilotics.

On the coast of the Red Sea, as we have already indicated, the population is markedly dark—but with the Caucasoid features in a large proportion of cases. This is explicable when we consider the quite unsuitable environment for Caucasoid settlement. The intense heat produces conditions in which it is impossible to work. Even today, with air-conditioned offices only open for six hours or less, one is left completely exhausted. But settlers do not work in air-conditioned surroundings. They have to work in the fields, herd cattle, labour at building houses and fortifications, and fight, all in conditions dictated by the climate, which here is one of the worst in the world.

Unless an energetic people can in fact work hard, and so accumulate reserves which provide the means of insulating themselves from their environment, the living conditions remain so bad

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

that the potentially energetic are killed off without having been able to achieve the fruits of their labours. As the conditions on this coastline are so inimicable to energetic Whites they cannot, in fact, exert themselves to the full potential of energy of which they would be capable elsewhere. Therefore they are not capable of accumulating those reserves out of which they would elsewhere have created a civilisation.

Although this coast has been one of the routes into north-eastern Africa, incoming Caucasoid blood has been first stultified and then largely eliminated by the hostile climate, *in respect of those traits which are most responsive to hot conditions*—namely the factors governing skin colour. Presumably, too, the genes giving a dynamic temperament have also been selected against in the same way.

The Sudan, therefore, represents the frontier of the White and Black races in a way Egypt does not. Despite the heat and desert the Caucasoids have managed to remain dominant in Egypt because they were able—as climatic conditions in North Africa were then better than they are today—to build a civilisation which protected them. Having achieved that White civilisation it has been possible to maintain it. This is, in fact, true of the whole of North Africa, whose peoples are essentially Caucasoid and not Negroid or Melanoid. The Black-White racial frontier does not run through the Mediterranean but through the Sahara until it reaches the Nile where it bends southward somewhat towards the Red Sea. The propaganda emanating from Cairo today for African unity, with Cairo as its centre, is purely political and has, in fact, no foundation in racial, geographical or cultural unity. Egypt belongs to the Near East and south-eastern Europe, not to the Negroid or Melanoid world of African unity.

Although Egypt belongs to the Mediterranean world, the Sudan is quite different. By its harsh, hot climate, its sandstorms and its extreme aridity, the Sudan sets a limit to unimpaired Caucasoid intrusion and settlement. It is, therefore, a racial shatter belt between the Whites and Blacks.

It is from here the change starts, as we go southwards, from White to Black peoples. But it should be emphasised that the "Blacks" are not necessarily Negroids. Rather they are from some "Australoid" or "Neanderthaloid" strain, with some infiltrations of Negroid, Bushman and Hottentot blood here and there, which combined with a very early intrusion of Caucasoid genes in primitive times. The Nilotic, so-called "Hamitic," and southern Sudanic peoples are racial breeds which have evolved along the frontiers of the White and Negroid blocks and have absorbed some ancient Australoid-like strain which formerly existed in north-eastern Africa and the adjacent parts of Asia.

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

In Khartoum itself, however, especially among the lower classes as seen in the markets, the Negroid elements are much stronger than is general throughout the Moslem northern half of the Sudan. This is shown by prognathism, thick, everted lips, very dark skins, and so on. Even so, however, it is difficult to find any large number of wholly and typically Negroid persons.

This much greater Negroidity must be attributed to the slave trade which, from time immemorial, has brought Negroes to the Sudan, and to Khartoum in particular. The Negroes have passed into the lower-class population to form a permanent element of it.

Temperamental qualities are very much subject to social conditions but, when all is said and done, these can only work within the hereditary tendencies provided for them to operate upon. The marked difference in temperament between the Sudanese and the Egyptians must, therefore, be looked upon as being, in part at any rate, genetic. Speaking generally, the Egyptians are more sullen and resentful than the Sudanese who show a much greater tendency to be cheerful and helpful. The former are a poor martial stock while the latter make good soldiers. This has been proved so frequently, right down to the war between Egypt and Israel, that it scarcely needs arguing. The hot climate of Egypt is no doubt against the dynamic elements in its White population. In the Sudan, however, it is not so much the Caucasoid strains in the population which provide the military strength, as a combination of these with the genes of the non-Negroid, Melanoid, indigenous stocks—from which have evolved martial elements of greater forcefulness than the White, basically Mediterranean, but exhausted, stock of Egypt.

It should be observed that the waiter class in the Sudan are also Nubians, as they are in Egypt, and on enquiry this appears to have been originally for the same reason. They are a tall, handsome people with regular, largely Caucasoid, features, and their skin is often yellow-brown. They are fairer than the average Sudanese, whose colour ranges from whitish-brown at one extreme to black at the other—although it is never really the coal black (or blue-black) of the West Africans.

The building of the Aswan High Dam in the borderlands between Egypt and the Sudan is causing a great displacement of the Nubians. Many are being moved south into new settlements in the Sudan, and others, electing to take financial compensation, are joining relatives in Egypt.

The medical superintendent at Port Sudan, Dr M. O. H. Gritly, provides an interesting study of Sudanese ethnology in himself. He is as light-skinned as a Mediterranean and has hazel eyes. His great-grandfather was a Cypriot Turk who was posted to the Sudan at a time when all these countries were under the influence of the

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

Sublime Porte. As this would not have been an isolated case, it may be seen as an example of one of the ways in which the Caucasoid genetic elements were reinforced among the pre-existing Caucasoid Arabs.

In addition, the Caucasoid strains are reinforced in all these places by Greek and Lebanese traders, although they do not add their genetic inheritance to the general Arab pool of Caucasoid genes because Christianity is a barrier to intermarriage.

Throughout Africa, in all towns where it is possible to trade, there are Hindu and Pakistani settlers who form a large section of the shopkeeping classes. They usually have regular Caucasoid features, and so form another, substantially Europoid, element in the population. The Hindus, however, do not intermarry with the indigenous population, so they do not affect its genetic constitution.

It is interesting to note that leprosy occurs mainly in the southern Sudan among the Nilotic tribes, the Dinkas and the like, and is, on the whole, not common among the peoples of Arabic culture in the north. Only three persons were admitted to leper colonies last year from the province of Port Sudan. Dr R. G. Cochrane, the well known expert on leprosy, believes that genetic factors enter into the incidence of leprosy, and this opinion is shared by Dr Price and Dr Wheate, respectively government leprologists of Ethiopia and Tanganyika. Of course, the effects of differences in climate between the northern and southern parts of the Sudan must also be considered. However, an anthropo-geographical study of the incidence of leprosy in the Sudan might well repay investigation.

Obituary

Professor HEINRICH QUIRING, Dr.Eng., Dr.Phil., was born on 31st January 1885 near Gelsenkirchen in Westphalia, and died on 13th June 1964 in West Berlin. His wife Leonie, son Heinrich and brother Friedrich survive him in West Germany. Though honoured by West Germany with a professorship at the Technical University of Berlin, and a Doctorate *honoris causa* of the University of Köln, and by East Germany with a geological research trip to the Pacific coast of Asia, the tragic political situation separated him from his beloved daughter Leonie-Waltraud in the Eastern Zone, where she was even prevented from attending her father's funeral in West Berlin.

It is difficult to say today which of Professor Quiring's many scientific contributions will be most recognised in the future, for he himself realised the truth of the pregnant line which Goethe put into the mouth of Faust: "Man errs so long as he is striving."—O. C. HILGENBERG.

Dr Quiring, who was a member of the Honorary Advisory Board of THE MANKIND QUARTERLY, will be especially remembered by our readers for his article "The Evolution of the Primates," an important contribution to science, which we published in January 1962. His death is a great loss to palaeontology and anthropology.—EDITORS.

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

Book Reviews

THE PROTESTANT ESTABLISHMENT

By E. Digby Baltzell. Random House, New York, 1964. Pp. 429. Price $6.95.

The main thesis of this remarkable book is that the American WASP (White, Anglo-Saxon, Protestant) Establishment, which has served throughout the history of the United States as the primary leadership element, is well advanced along the road of decadence from functioning aristocracy to parasitic caste. Professor Baltzell of the Sociology Department of the University of Pennsylvania attributes this decline to the exclusion by the Establishment of abler men from the newer component elements of the American population. He argues that, when an aristocracy prevents upward promotion into its ranks, it ceases to be representative of the best and hence forfeits its right to govern politically, control economically, and arbitrate and create in the spheres of art and science.

The historical evidence behind this thesis consists almost entirely of a history of the changing relationship of American Jewry to the established Anglo-Saxon American élite. Dr Baltzell traces this oscillating relationship with great skill and insight until he reaches the post-World War II decade. At this point his ardent political identification with the Roosevelt-Kennedy brand of social democracy dims his analytical abilities and he frequently crosses the thin frontier between American sociology and special pleading.

Baltzell finds that the trend since World War II has been to accept Jews into all phases of American leadership with the exception of the corporate high command, the country club, the college fraternity and the *Social Register*. Moreover, both the rôle and ethnic exclusiveness of the fraternity and club have abated considerably in the past two decades. An analysis I am making at present of the national-linguistic composition of the directors and chief officers of the 500 leading corporations in the United States by means of the name-frequency method strongly supports Professor Baltzell's conclusion.

Baltzell also argues that the freezing of the WASP Establishment into caste rigidity has led to an involuntary abdication of power on its part. Politically, it has become a dwindling minority. The dominant coalition in American government over the past generation has been the traditional Democratic Party amalgam of racial, religious and regional minorities with increasing stress on the youth, the intellectuals, labor, Jewry and the Negroes.

The Protestant Establishment has already had considerable impact on American thinking and it is likely to have more in the years to come. This is due to the fundamental truth of its thesis in so far as Jewry is concerned, to its persuasive and deft style, to its appeal to the contemporary articles of faith of American liberalism and to its confusion of categories and spectacular leaps into illogicality.

To concentrate on the last point. In his conclusion, Professor Baltzell states: ". . . this book has purposely not focused its main attention either on the nature of the Jewish community or on the qualities and personal characteristics of Jews. Rather it has assumed that anti-Semitism and ethnic prejudice in general are largely due to the values and attitudes held by the members of the dominant group."

One hopes that Dr Baltzell wrote this with his tongue in his cheek. Let us agree that it is immoral to exclude any qualified person from a

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

creative minority on grounds of race. It does not follow that the exclusion will seriously impair the ability of that creative minority to fulfil its rôle. The impairment depends on the creative potential of the excluded group. In the case of American Jewry, this potential is enormous.

Thus, the fact that Baltzell chooses the Jews for his detailed study of the American élite and its exclusive practices, rather than the Negroes, is not accidental, but vital to the persuasiveness of his case.

My second and less important reservation concerning the book is that Baltzell overemphasizes the importance of the areas in which exclusion is prevalent. The only one of these four élites which is functional, rather than a mere token of prestige, is the modern corporation. Here the situation is changing toward a lessening of ethnic and national exclusiveness.

Third, it seems difficult to reconcile the theory that the entrenched WASP Establishment is fighting a last-ditch political battle to hold high the walls of lineage and Nordic pedigree with its fairly general support of Senator Barry Goldwater in 1964. Baltzell himself observes that the McCarthy movement, which probably had majority WASP support, chose as its preferred victims Anglo-Saxons with three names and impeccable pedigrees. Goldwater is half-Jewish and McCarthy was of Polish-Irish stock.

Fourth and last; Dr Baltzell is at his worst when he becomes a mere special pleader for New Deal, Fair Deal, New Frontier and Great Society. He begins with the self-evident proposition that true conservatives favor those reforms necessary to meet changing conditions and to strengthen established institutions. From this, he proceeds to the non-sequitur that Franklin D. Roosevelt, John F. Kennedy and various others were great conservatives. The supposed proof is that they did advocate change, yet did not propose that all institutions be levelled to the ground.

NATHANIEL WEYL.

SOUS-DEVELOPPES : SOUS-CAPABLES

By Pierre d'Arribère, François d'Orcival, Henri Prieur and Dominique Venner. Cahiers d'Europe Action, Paris, 1964. Pp. 109. Price F. 5.00.

This paperback publication contains some useful information. While most people in the United States and the United Kingdom suppose that they contribute more than any others to the under-developed countries, this is not the case when the subventions to these countries are worked out in terms of proportions of the national resources. According to these authors, France heads the list with a figure estimated at 3.1 per cent; the Netherlands, Belgium and Portugal all take precedence before Great Britain's 1.32 per cent, followed by Germany, and then the United States with 1.00 per cent. At the bottom is the U.S.S.R. with 0.5 per cent. These figures suggest that the proportions borne by such countries as France and Portugal are really crippling burdens on the national effort and economy, and one wonders how long this underpinning of the economies of the under-developed countries can go on.

The authors point out the misuse of much of this aid, not only in the enormous increase of officials who go on to the wages ledgers of the states, but also in the sheer extravagance and waste on the part of the rulers, dictators and ruling cliques of some of these countries. Some of the aid has been spent on enormous palaces, and in one case even the stonework for the interior decoration was brought in by air transport.

This book is the reverse of the usual book produced today on the subject of aid to under-developed countries: it does not take for granted that aid should be given in greater and greater quantities but, as the title suggests, argues that these countries are under-developed largely because they are incapable of erecting the grandiose states that they and the outside world envisage for them.

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

THE KICKAPOOS: LORDS OF THE MIDDLE BORDER

By A. M. Gibson. University of Oklahoma Press, Norman, 1963. Pp. 391, 16 plates, 1 map. Price $6.95.

This book deals with what was perhaps the principal tribe of the Algonquian confederation. The book is extremely well written, and it is difficult to put it down. The author is to be congratulated on making a difficult subject so intensely readable.

Apart from following the history of the Kickapoos, first in their hostility to the French, then as allies against the British, and later as allies of the British against the Americans, not only is the narrative extremely interesting but from it emerges the savagery of the Indians in warfare. They not only destroyed their White enemies but wiped out whole clans and even tribes, having no respect even for the women and children whom they would as readily scalp as the warriors—although as slaves these had a potential value which often protected them. One can realise why in such a society as the Amerindian the population remained static. Furthermore, the intense cruelty of the Incas, with their bloody human sacrifices, was only the urban civilisation's expression of the same barbarity among the more primitive rural Amerindians.

To get some idea of the way the Kickapoos waded through blood one has only to remember that even the small scale raiding of American settlements resulted in a massacre of an estimated 15,000 American settlers between 1783 and 1790. Their depredations on other Indian tribes caused their complete, or almost complete, annihilation.

On the expropriation of Indian lands, quite another matter from their barbarity, there is much food for thought—for the net result is that the United States, except for the south, has become largely a White man's country. The same thing is, of course, true of Canada also. South Africa and Rhodesia have failed to carry out these thorough methods, and have been left with racial problems which those who are enjoying the fruits of really barbarous conduct to the native populations' rights feel they are in a position to criticise without any twinges of conscience.

Dr Gibson's very interesting book continues the history of the tribe down to the present century.

THE GROWTH AND DECLINE OF THE CUBAN REPUBLIC

By Fulgencio Batista. Devin-Adair, New York, 1964. Pp. 300. Price $6.50.

This excellently documented history of Cuba in the twentieth century is written by the leader who dominated the island politically from 1934 to 1959. His successor was Fidel Castro.

General Batista has been portrayed as a blood-thirsty and corrupt dictator whose government was characterized by "indifference to the needs of the people for education, medical care, housing, for social justice and economic opportunity," to quote the 1961 American *White Paper on Cuba* written by the social historian, Kennedy advisor and Harvard professor, Arthur M. Schlesinger, Jr. In this brief volume, Batista shows that these and similar charges are lies. His refutation is a detailed exposition of the enormous strides Cuba took in public health, edocation and social welfare under his leadership together with the contemporary appraisals of competent independent observers.

He attempts to trace the Communist campaign of villification against his régime from its inception and its percolation through such liberal circles as that of Schlesinger. There is no implication that Professor Schlesinger

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

and others of his sort were more than careless and innocent dupes of this brilliantly engineered Communist propaganda campaign.

This book is in a sense a case study in some of the moral implications of contemporary equalitarianism. The "villain," Batista, is a man who rose from poverty, educated himself, made Abraham Lincoln his exemplar, rose steadily through hard work, ambition and superior intelligence to the Cuban presidency, then used that power to make it possible for the poor to help themselves and for Cuba to advance toward democratic government through decentralization. The hero of the liberals, Fidel Castro, is a man without patriotism, religion or integrity. Emerging from a rich but murky milieu, he advanced in university politics through betrayal and murder, seized power by deception, turned his country over to a foreign state and proceeded to destroy its institutions. The nihilism of Castro has as its outward symbol beatnik mores and dirty fingernails.

E. NEVIN.

AZTEC THOUGHT AND CULTURE: A STUDY OF THE ANCIENT NAHUATL MIND

By Miguel León-Portilla. Translated from the Spanish by Jack Emory Davis. University of Oklahoma Press, Norman, 1963. Pp. 241, 8 plates, 4 line illustrations, 1 map. Price $5.75.

The author points out that for 2000 years before the arrival of the conquerors from Spain in 1519 there existed in central Mexico a high civilisation which had developed the arts, literature and technology—although in this respect it was in fact remarkably deficient of certain aspects found elsewhere—as well as social institutions, religion and education.

He quotes liberally from the Aztec codices on subjects dealing with life and the universe, God and the comprehension beyond earthly experience; all of which, taken together with their reasoning in other diverse fields, reveals that the Aztecs had a philosophy of life.

Certainly anyone wishing to get inside the Aztec mind will need to study this work and absorb its lessons and message.

BEYOND ARABIAN SANDS

By Grant C. Butler. Devin-Adair, New York, 1964. Pp. 223. Price $4.95.

This is a naïve and superficial volume on the people and politics of the so-called Arab world by a former American oil company employee. It is as rich in name dropping as it is poor in insights. Mr Butler apparently accepts Ben Bella's denial of Communist sympathies at face value and asserts that the "era of kings and shaikhs" is "drawing to a close. . . . Nasser is a progressive force." Alleged French atrocities against the Algerian rebels are detailed without supporting evidence, but the other side of this grisly picture is simply ignored.

In addition to its anti-French—and, one might say, anti-European—prejudice, the book contains errors of fact, and such absurdities as the judgment that President Nasser "reminded me of a big, goodnatured football player." As most informed people know, Nasser spent most of his adult life as an Egyptian army officer engaged in clandestine conspiracy against his government and his king. Among his outstanding qualities as a political leader are guile, secretiveness and dissimulation.

Butler is unfortunately unaware of the really fundamental problems of the Islamic world: on the one hand, an uncontrolled population explosion on a scanty resource basis; on the other, the emergence of ruling classes

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

from the least promising sectors of society. The displacement of European and Jewish élites is one aspect of this. Another is the submergence in Egypt and elsewhere of the indigenous Christian minorities, who have consistently displayed throughout history higher intelligence and superior character than the Muslims. In fact, a Coptic view of Egyptian history is that the land contributed to civilization from the Old Kingdom to the Islamic conquest because its élite ruled with little interruption. The comparative sterility and visible retrogression of the centuries that followed are attributed by the Copts to the fact that Egypt was ruled by alien Muslims and Christians who were converted to Islam because of poverty of moral character and because they belonged to the peasantry and urban poor who were unable to pay the heavy taxes levied upon the Christian élite.

E. NEVIN.

DAMASCUS UNDER THE MAMLUKS

By Nicola A. Ziadeh. University of Oklahoma Press, Norman, 1964. Pp. 140. Price $2.75.

In this book Mr Ziadeh, of the American University of Beirut, covers the geography and history which form the background of Damascus; and then, in particular, he discusses the history of the city under the rule of the Mamlūks. These were soldiers recruited from slaves who were, of course, usually prisoners of war and who came to play an important rôle in the military history of the Islamic empire—until ultimately they took it over. They were, often enough, of Christian origins, and were largely representative of the European peoples as much as of the Arabic world.

The complete ruthless savagery of the Mongol invasions of Syria, and other lands for that matter, is brought out in the story told of the barbarities of the Mongol conquests of Damascus and surrounding territories—and, what is more, the unscrupulous betrayal of their word as to the terms of surrender.

This book includes an account of the foreign communities which lived in the city, including the various groups of European merchants, and describes the position of the Christian, Jewish and Samaritan communities.

Mr Ziadeh refers to the eventual overthrow of the Latin Kingdoms in Palestine, Syria, and Lebannon, and the part played in this by Nūr al-Dīn and, ultimately, by Saladin. In this connection also it should be observed that we are dealing with people who were not Arabs in the true sense of the word, but Kurds, or people of Kurdish intermixture, of Nordo-Dinaric-Armenoid derivation rather than Mediterranean.

WHITE TEACHER IN A BLACK SCHOOL

By Robert Kendall. Devin-Adair, New York, 1964. Pp. 241. Price $4.95.

This is the slightly fictionalized account of a sensitive teacher's frustrated effort to bring education to preponderantly Negro children in the public schools of Los Angeles. Kendall's classrooms contain psychotics and borderline mental defectives, marihuana peddlers, juvenile prostitutes, pupils obsessed by hatred of the white race, a sadist who mutilates cripples and a moron who crawls into class on all fours and then pretends to read the telephone directory. These pupils are depicted as totally indifferent to education, incapable of expressing even the simplest ideas intelligibly and concerned solely with promiscuous sex and getting money without working for it.

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

The school authorities are "progressive" and permissive. They give a Christmas play (subject to the rule that Christ may not be mentioned—because of the separation of church and state), a Memorial Day Program (in which reference to America's war dead is forbidden as militaristic) and a Faculty Frolic, in which female teachers do suggestive dances before their depraved student audience.

As here depicted, the school authorities are chiefly concerned with avoiding scandal and, therefore, obstruct Kendall's efforts to institute police action against acts of mayhem and narcotics smuggling by the Negro students. Even the mentally defective and habitually criminal pupils are passed regularly into higher grades. When Kendall is attacked by a pupil, armed with a knife, he is blamed for failure to establish rapport.

This is a shocking account of a deplorable situation that is widespread. The fundamental evil is the assumption that the two races are mentally equal. From this it follows that amentism and delinquency are products of a bad environment which the teacher can and must correct. To a lesser extent, the deliberate destruction of discipline and the refusal to inculcate patriotism, respect for religion and a sense of civic duty may reflect Communist infiltration into the school system. It is unfortunate that Kendall chose a fictional medium which deprives his charges of specificity.

E. NEVIN.

NORTH CHINA VILLAGES: SOCIAL, POLITICAL, AND ECONOMIC ACTIVITIES BEFORE 1933

By Sidney D. Gamble. University of California Press, Berkeley and Los Angeles: Cambridge University Press, London, 1963. Pp. 352, 17 figures, 16 plates. Price $7.50: 60s.

This is a rather unusual book in the sense that it deals with a situation, although recent in this century, which has gone for ever since the assumption of power by the Communists in China, following upon the changes wrought by the Japanese invasion.

North China Villages is an account of the way the villages were run. The description is based on field work which was done under the direction of a Chinese sociologist who had received his training in the United States. The material is therefore new and has not previously been published. Mr Gamble has had several years experience of living in China, and he is an expert on Chinese society. The book is a valuable addition to our knowledge of modern China, and is useful for all comparative social anthropological studies in that area.

A SHORT HISTORY OF IRELAND

By Roger Chauviré. Devin-Adair, New York, 1961. Pp. 145. Price $3.00.

This thin volume is an excellent introduction to the history of Ireland, her civilization and social institutions. Its style is felicitous, the selection of material on the whole commendable, and the viewpoint sympathetic.

Professor Chauviré stresses the essentially aristocratic structure of Irish society. As in Scotland, station derived from ancestry and not, as in the English case, from landed possessions. English policy toward Ireland, notably during the sixteenth century, had as its object extermination of her aristocracy. Chauviré points out that the comparative success of this policy had dire consequences for Irish culture and civilization, but that these were mitigated by the gradual absorption of the English and Scottish colonists imposed on the Irish for purposes of gain and pacification, into the Irish body politic.

E. NEVIN.

Macdonald Printers (Edinburgh) Limited

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

GENUS

The Review of the ITALIAN COMMITTEE FOR THE STUDY OF POPULATION PROBLEMS *and of the* ITALIAN SOCIETY OF GENETICS AND EUGENICS. *Edited under the auspices of the National Research Council.*

EDITOR : CORRADO GINI

Genus accepts scientific articles, papers, notes and communications written in Italian, English, French, German and Spanish in the field of the different sciences related to population problems (Demography, Sociology, Economics, General Biology, Genetics, Eugenics, Anthropology. Social Hygiene, Psychology, Geography).

3000 Lire U.S. $6.00

Orders should be addressed to: SEGRETERIA DEL COMITATO ITALIANO PER LO STUDIO DEI PROBLEMI DELLA POPOLAZIONE—Via delle Terme di Diocleziano, 10—ROMA, ITALIA.

THE MANKIND QUARTERLY

SUBSCRIPTION RATES

Per single issue—6/- a copy ($1.25); annual subscription (4 issues)—£1.1.0 ($4.00); three year subscription (12 issues)—£3 ($11.00). Post free by surface mail. Copies will be sent by air mail on payment of 5/- ($0.75) for each copy ordered, additional to the above payments. No responsibility can be accepted for copies lost in the post after dispatch.

Subscription Offices:

102 GREAT RUSSELL STREET, LONDON, W.C.1

CONTRIBUTIONS

Contributors to THE MANKIND QUARTERLY are requested to forward three copies of all matter submitted for publication. A short biographical note and a suitable photograph should also be included.

Editorial Offices:

1 DARNAWAY STREET, EDINBURGH 3, SCOTLAND

The Editors do not accept responsibility for the views expressed by individual contributors.

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

UNIVERSITY OF EDINBURGH

At no time in our history has the need for higher education been greater: at no time has the demand been more insistent, or the requirements more exacting. The scope and content of many aspects of scientific learning has more than doubled in the course of a generation; and with the growth of science a corresponding efficacy in the processes of general and humane education has become essential.

The University of Edinburgh, conscious of the immensity and responsibility of its task, is painfully aware that its physical assets, in the shape of laboratories, classrooms, ancillary accommodation, and the necessary equipment, are inadequate and out of date.

These things cost money. Though much will be provided from Government sources, the University itself will have to meet the cost of a substantial part of its building programme, which, over the next few years, will involve the expenditure of many millions of pounds. To this end it is making an Appeal to all its graduates and friends, and has already raised more than £500,000. Still more is required if our young men and women are to have the education they desire and deserve.

All contributions will be most gratefully acknowledged, and full information on the University's needs and plans, with advice on methods of contributing, will gladly be sent on application to the Secretary to the University, Old College, South Bridge, Edinburgh, 8.

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED